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LEADING ARTICLES

SOME INTRINSIC CHARACTERISTICS OF PARALYSES.

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ST. LOUIS.

PAPER I.

PARALYSIS is a term applied to a condition in which the power, voluntary or involuntary, which causes contraction of muscles is lost.

When muscles that normally contract in obedience to the will or other vital influence, have lost this power, they are said to be paralyzed, or in a state of paralysis. With reference to striated muscles, with which we are now concerned, paralysis may be defined as loss of power to move voluntarily a muscle or muscles, a limb or limbs, or the whole body. It is one of the most frequent symptoms of disease of the nervous system, and in itself is objective. Paralysis presents itself in all degrees from slight loss of power (paresis) to complete inability to move the affected part. It may take an infinite variety of forms, some of which from their frequency have received technical names; hemiplegia is paralysis of one side of the whole body including the head; paraplegia is paralysis, of equal bilateral extent and limitation, of both sides of the body; monoplegia designates loss of power to move one limb, and diplegia, two or more corresponding limbs; alternating or crossed hemiplegia is paralysis of one side of the face and of the opposite side of the body, etc.

It is customary to use terms like hemiplegia for loss of voluntary power, even when the paralysis is only partial, or unequally developed in the limbs or parts of the affected side.

Paralysis, whatever its location or distribution, presents certain qualities: it may be accompanied by stiffness or contracture of the limb involved (spastic paralysis), or the paralyzed part may be limp (hypotonic or flaccid paralysis). Atrophic paralysis is loss of power with atrophy of the affected muscles. In general the qualifying terms used with the words paralysis and palsy are immediately clear and need no special definition.

Though paralysis is strictly objective, it is not necessarily a symptom of organic nervous disease; for loss of power due to organic lesion of the nervous system may be very closely imitated or simulated voluntarily, and paralysis is a frequent symptom of certain functional nervous states (hysteria, temporary unconsciousness). Therefore, it is essential to be familiar with the means that make it possible to distinguish organic from functional paralysis.

The complete muscular resolution that accompanies sudden and complete loss of consciousness is a state of general paralysis often accompanied by loss of all the reflexes; but such a condition is either temporary and soon followed by a complete or partial recovery of voluntary and reflex activity, or by death. Such general conditions are not now the subject of discussion; we are considering forms of paralysis in which there is no apparent implication of consciousness, and the loss of power is the most important symptom, and without reference to the symptoms that preceded or accompanied the beginning of the paralysis.

Is a given case of paralysis organic or functional?

Before discussing the answer to this question, which will require study of the peculiarities of several types of paralysis, one fact must be emphasized, a fact lost sight of in diagnosis; namely, that strictly speaking, and considered in and for itself, paralysis cannot be judged by other symptoms. For example, in a case of hemiplegia, we find Babinksi's sign, ankle-clonus, a lively knee-jerk, and an excessive radial reflex, in fine,

unequivocal signs of an organic lesion of one pyramidal tract; and, reasoning by induction, we conclude that the accompanying paralysis is organic. In this conclusion we have not considered the paralysis itself; we have left it quite aside and thought only of the certain signs of organic lesion of the nervous system. There is every reason to conclude that paralysis associated with these certain signs of organic nervous lesion may be organic wholly or partly; but their association is in itself no demonstration that the paralysis is wholly organic, for the reason that one or more of these certain signs of organic nerve-lesion may exist and prove that there is an organic lesion without any paralysis. Therefore, in order to appreciate the organic or functional nature of paralysis, or the possible association of the two varieties, we must study this symptom in relation to essental peculiarities that will aid us in deciding the point at issue and afford important elements for prognosis.

Studying the paralysis in itself, let us take a case in which the arm is in a state of limp palsy. Now this loss of power may be due to idea (functional) or to a material nerve-lesion (organic). The arm hangs limp and inert, obeying the law of gravity, and it may be moved about passively with no other resistance to overcome than the weight to be moved; and since the joints are "loose" a flail-like movement may be passively induced.

If this flaccid, relaxed state be due entirely to an organic nerve-lesion, since the latter is unchangeable, the resulting condition of limpness of the arm will not vary; under all circumstances it will present the same peculiarities. If on the other hand, the limpness or flaccidity vary momentarily or from time to time under observation, we may safely conclude that the paralysis is not entirely organic; and if, besides, there be no other sign of organic nerve-lesion (abnormal reflexes, muscular atrophy, etc.), we may safely infer that the paralysis is entirely functional. To appreciate practically this point, the observation must be repeated and made very carefully; and we must resort to procedures the object of which is unknown to the subject. For example, in the case of flaccid brachial palsy under discussion, the observer raises the arm passively to the level of the shoulder and maintains it there, carefully noting the effort required and the sense of weight experienced with each repetition of the maneuver; on each occasion the arm should ultimately be allowed to obey the force of gravity. In case of organic paralysis the arm will return immediately to its original position. If, during the test, the arm remain for an instant extended without support; if there be any variation of the force necessary to raise it to a horizontal position, we know immediately that voluntary nervous power has intervened to cause a variation from absolute inertness, and that there is certainly functional paralysis, no matter what other signs indicate the probability of some degree of organic paralysis. This procedure tests merely the deltoid muscle, but by appropriate manipulation we can test similarly other muscles of the limb. In order to make the results of such experiments convincing, the attention of the subject should be distracted by conversation, or otherwise, from the maneuver to be carried out.

With respect to brachial paralysis, whether due to central or peripheral nerve-lesion, it should be mentioned that in many such cases, if not in all, a state of muscular hypotonicity exists which permits passive overflexion of the forearm on the arm (Babinski). When this condition exists, since it is a feature that belongs to paralysis in itself, because it depends upon the muscular condition, we may be sure that we have before us a symptom caused by nerve-lesion, unless it can be explained by idiopathic atrophy of the muscles concerned; for it never occurs unless made possible by practice or as a natural peculiarity of several joints, except as a result of the causes mentioned. Muscular hypotonicity never results from hysteria. The practical value of this sign of hyperflexion of the forearm on the arm depends upon its occurrence on the paralyzed side as compared with its absence on the opposite side, and the fact that the degree of passive flexion of one elbow is readily compared with that of the other. Doubtless in cerebral palsies the same hypotonicity exists in other muscles than those concerned in overflexion of the arm at the elbow, but is it less apparent because the conditions for comparison at other joints are less favorable.

In contrast with the limp paralysis just considered, let us next examine a case of spastic or stiff palsy of the arms.

The sign of over-flexion of the forearm on the arm has here the same value as in the preceding case—it indicates organic lesion as a cause of the paralysis.

Again, similar careful examination for spontaneous variations of the apparent loss of power should be made; and such variations, in the presence or absence of other signs of organic nerve-lesions, prove that the paralysis is partly functional or incomplete.

In this case there are still other elements to be studied; namely, the peculiarities of the stiffness (spasticity, contracture) presented.

Spasticity or contracture of muscles due to organic nerve lesion is not subject to sudden variations of degree, though it is at certain periods characterized by gradual increase or decrease extending over weeks or months. But the contrary is true of functional contractures and therefore, spasticity that presents momentary or occasional variations affords a positive indication that it is dependent upon a functional cause.

In order to convey the full meaning of this difference, an actual case of hysteric (functional) contracture and paralysis may be cited. The lower extremity is found in a state of rigid semiflexion involving thigh, leg, and foot, so that the whole limb seems actually subject to a permanent deformity. Under an anesthetic the limb is forcibly straightened and placed in a cast; finally the limb is released, and all contracture is found to have disappeared. If this operation in such a case has not been attended by physical injury (rupture of muscles, tendons, etc.), and the limb presents normal muscular tonicity after it, the result is a demonstration that the original contracture was functional. In a similar case of contracture due to organic nerve disease, while mechanical force might temporarily overcome the deformity, the latter would immediately return when the modifying force had been removed.

Spasticity and contracture due to organic nerve lesions present other characteristics that serve to differentiate them from similar conditions due to functional nervous disease.

Contracture due to organic nerve-lesion, while practically permanent, may be gradually overcome for a time by an effort that opposes it; with the effort made to extend the fingers flexed in contracture, for example, there is a gradual and progressive relaxation of them, and in the operation the examiner experiences the sensation of overcoming a purely mechanical and diminishing resistance. Extension once accomplished, and the fingers released, they gradually assume the previous state of flexion. In a similar case due to a functional cause, with a similar procedure, the result is quite different. The effort to overcome passively flexion of the fingers encounters gradual or sudden increase of resistance—a positive variation of the force of contracture—to overcome which great force may be required. Such a variation is absolutely indicative of the functional nature of the contracture.

Again, with the fingers in a fixed position of flexion and the wrist partially flexed, a differential sign may be readily brought to light. In functional contracture of the fingers in flexion, the position of the wrist whether in extension or flexion, has but small influence upon the flexor contracture of the fingers; any effort to alter the position of the fingers by altering the position of the wrist is attended by increase of the flexion of the fingers unless the flexion of the wrist be forced to a point where even forcible voluntary flexion of the fingers is impossible. Therefore, under such circumstances, to overcome flexion of the fingers very forcible and complete passive flexion of the wrist must be made On the contrary, in flexor contracture of the fingers due to an organic nerve-lesion, an alteration of the flexor position of the fingers is immediately related to the passive alteration of the position of the wrist. For example, if, in organic flexor contracture of the fingers, the wrist be passively flexed, there follows simultaneously a proportionate relaxation of the flexor contracture of the fingers; if, on the other hand, the wrist be passively extended, the flexor contracture of the fingers will be proportionately increased (Babinski).

In the study of contractures it must be remembered that no matter whether the cause of the original contracture be functional (hysteric) or organic, if it be maintained long enough fibro-tendonous retractions occur which mechanically fix a limb in a vicious position. Therefore, such fixation is not a demonstration that the original cause was an organic nerve-lesion. In general it may be said that the deformities due to hysteric contracture are much more marked than those due to organic nervous disease if atrophy has not taken place; and, too, that they differ usually in form from those that experience has shown to be characteristic of organic nerve-lesions.

It may be laid down as a law that when a muscle or a group of muscles that cannot be contracted separately by the will—*i. e.*, not without contraction of other muscles normally associated with it in the synergy necessary for certain movements—are paralyzed, the loss of power is due to a nerve-lesion (disease of the muscles concerned being excluded). In other words, there are certain synergic associations of muscles and groups of muscles in movements which cannot be voluntarily dissociated. Therefore, in case there is loss of power in one or more muscles of a group or groups of muscles known to be thus synergically associated, while the others act in obedience to the will, we know that the paralysis is organic. A few examples will serve to make this point clear.

A patient is unable to close one eye (facial paralysis). When told to close the eyes, that on the sound side closes normally; on the paralyzed side, the eye-ball rolls upward in the orbit, conceals the cornea, and exposes

the sclera alone in the palpebral fissure, the size of which has diminished but slightly or not at all. This is Bell's sign, and it proves that the loss of power to close the eye is due to an organic nerve-lesion; for this dissociation of complete upward movement of the eye-ball without closure of the eye cannot be voluntarily or functionally induced. We know without further consideration that there is an organic element in the case.

A patient presents the following conditions: when the right arm is extended horizontally in front of the body, the right scapula springs backward very prominently from the chest wall, in a manner to suggest a wing, while on the other side, in the same movement, the scapula remains close to the chest wall. We know immediately that there is paralysis of the right serratus magnus muscle, due to actual nerve-lesion, because contraction of the muscles that elevate and extend the arm cannot be voluntarily or functionally dissociated from contraction of the serratus magnus.

When the forearm is forcibly flexed on the arm, with prominence of the biceps there is also prominence of the supinator longus which forms the firm, rounded contour of the radial side of the forearm. Absence of the prominence of the supinator longus when the arm is forcibly flexed proves that there is organic paralysis of that muscle, since in this act the contraction of the biceps and supinator cannot be voluntarily dissociated (Babinski). Since the supinator is frequently paralyzed with the extensors of the hand and fingers, the presence of this peculiarity makes it possible to determine the true nature of extensor paralysis of the hand which may be closely imitated by voluntary wrist-drop.

There are also synergic functional associations of corresponding muscles and groups of muscles of the two sides of the body, unilateral disturbances of which have similar diagnostic value. A few examples of such anomalies will emphasize the importance of familiarity with the law of functional synergic association of muscles.

With the neck and chest exposed, a normal subject is made to open the mouth as forcibly and as wide as possible. In this act, if the subject be not too fat, the long fibres of the platysma myoides muscle will be seen to stand out in several lines reaching from the lower jaw to the upper portion of the chest, and effacing or altering the depressions above the clavicle on each side; and these alterations of the lateral contour of the neck will be practically symmetrical and of equal degree. In any event, under normal circumstances, in this act, whether the platysmas contract or not, there is no appreciable difference of contour on the two sides of the neck. On the other hand, when the lines of the platysma stand out markedly on one side, and on the other side they do not appear at all or are but slightly marked, we may conclude with certainty that there is an organic nerve-lesion that causes the deficiency on one side; for this alteration of bilateral simultaneous activity of the platysmas cannot be voluntarily imitated in the act of forcibly opening the mouth. In order to prevent any misunderstanding, it should be pointed out that unilateral contraction of the platsyma is possible when the jaws are firmly closed, and that unilateral spasm of this muscle occurs in some cases of spasmodic wry-neck, and therefore it might be imitated voluntarily; but in the presence of such permanent or occasional spasmodic contraction of one platysma, if the other were not paralyzed it would contract when the mouth were forcibly opened.

The phenomenon just described—contracture of the platysma on one side with absence of contraction of the other, is called *the sign of the platysma* (Babinski). It is often found in organic hemiplegia and unilateral facial palsy—and never in hysteric hemiplegia; hence its importance when present as an aid in differential diagnosis of these common pathologic states.

Another sign due to the acute clinical observations of Babinski, usually, if not always, indicative of organic hemiplegia, is that known as *combined flexion of the trunk and thigh.* This sign is described by Babinski as follows:

"It is found in the majority of patients affected with organic hemiplegia when the patient lies horizontally on a hard surface like the floor, with the arms crossed on the chest, and then makes an effort to rise to a sitting position. The thigh on the paralyzed side executes a movement of flexion on the pelvis and the heel leaves the floor slightly. On the opposite side the limb remains immobile or the flexion of the thigh and the elevation of the heel occur later and are very much less marked than on the side affected with paralysis; at the same time the shoulder on the normal side is carried forward."

"The movement of combined flexion of the thigh and trunk naturally implies that the limbs are capable of a certain amount of movement; thus, theoretically, it should be absent when paralysis is complete, and observation confirms this. In fact, generally it is only some time after the beginning of hemiplegia, when the paralysis is somewhat attenuated, that the phenomenon appears. In the earliest phase of hemiplegia, since the lack of power on the paralyzed side is complete, either the patient is so prostrated that he is

not capable of the least effort, or when he tries to assume a sitting posture he makes a movement of rotation around the long axis of the body toward the paralyzed side; this movement seems to me to be the result of the limited action on one side of the body of the muscles which incline the trunk forward."

In contrast with these positive signs of organic nervous disease that form features of paralysis itself, there are others quite as positive which form features of some functional spasms which simulate paralysis. For example, ptosis, or falling of the eye-lid, may be organic or functional; but functional ptosis is in reality spasmodic or due to voluntary contraction of the orbicularis of the eye-lids. Falling of the upper eye-lid if due to organic nervous lesion, when the facial nerve is intact, is always characterized, when the patient makes an effort to elevate the lid, by elevation of the corresponding eyebrow, and even backward inclination of the head, the obvious purpose of which is to uncover the pupil. This is very apparent in double ptosis, and brought out clearly when the weakness is unilateral, by covering the eye of the unaffected side. Here the elevation of the eyebrow at command to try to open the affected eye is practically demonstrative, like Bell's sign of an organic lesion.

On the other hand, unilateral hysteric or pseudo-ptosis presents a very different picture; the partial or complete closure of one eye is accompanied by lowering of the corresponding eyebrow, and the other eye, likewise, shows a slight lowering of the upper lid accompanied by elevation of the corresponding eyebrow. Such a picture is prcof that the anomaly is functional (hysteric, voluntary). The truth of this assertion may be readily demonstrated by attention to what takes place when one eye is voluntarily closed and the other is kept open. One may study this act in oneself with a mirror, though better in a normal second person. When one eye is closed and kept closed the eyelid is depressed with contraction of the orbicularis of that eye; the other eye also tends to close, and a forcible effort must be made to keep it open, which results in an initial increase of elevation of the lid which is aided by elevation of the eyebrow. With continuance of this voluntary closure of one eye, the other eye tends more and more to close, and with this the elevation of the corresponding eyebrow is increased to oppose the tendency of the orbicularis to act with its fellow. This fact will be readily apparent to one who begins to use a microscope with one eye while closing the other; as the monocular work is continued it will be found increasingly difficult to maintain the eye open and the increasing effort will show in more marked elevation of the eyebrow. Of course, with practice these phenomena may be obviated. The explanation of these facts is to be found in the functional relations of the ocular muscles, which are yoked together and have an organic tendency to act together in the same way; therefore, when the will intervenes to prevent this, signs of the automatic involuntary tendency are never wanting.

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THE HYGIENE AND PREVENTION OF TUBERCULOSIS.*

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WE have just listened to a discussion of the causes of consumption and the changes which the tissues undergo when affected by this disease process, and we are in a good position to appreciate the importance and the possibility of applying hygienic measures in the stamping out of this disease process. Of all diseases common to man, tuberculosis is the most widespread and the most deadly. Other diseases have at times caused more dismay, more panic and for short periods, even wider destruction, but consumption has been the most constant and most pestilental of them all; the worst scourge of mankind. It has indeed been most properly termed "The Great White Plague." It spares no nation, no age, no vocation, no class of people.

The following figures may serve to emphasize the importance of considering the subject of tuberculosis. In this country about 1,125,500 people have consumption. It is estimated that the cost of consumption in New York is $1.16 per day per victim. This would mean that consumption is costing the United States $476,325,000 every year and costing the State of Iowa with its 8,000 consumptives, if the recent estimate made by the Board of Control be correct, $3,387,200 every year.

According to our courts, the value of a human life is placed at $5,000. It is estimated that 150,000 people die from consumption in the United States every year. If we consider the rating of our courts as equitable, tuberculosis is costing the United States $750,000,-

*Read before the second annual meeting of the physicians of the First Councillor District of Iowa at Fairfield, Ia., January 26, 1906.

000 a year and the State of Iowa $10,000,000 a year. But you say, that the estimate as to the value of a human life is made too high—not too high when the estimate is made on me, but my neighbor isn't worth quite so much. Let us then make a more conservative estimate. The average age at which consumptives die is 35 years. The life expectancy of a man of 35 years of age is 32 years. This means that 4,800,000 years of life are lost in the United States by a single year's consumption death-list. If we figure that an individual is worth $50 a year to a community, the annual loss to the United States from consumption is $240,000,000, and the the State of Iowa, it is $3,200,000.

How are we to protect ourselves from tuberculosis?

Let us first consider measures to avoid the tubercle bacillus. Of prime importance is the subject of

a. Sputum and Expectoration. — The sputum of a consumptive, coughed up and expectorated, is probably the cause of more than 95% of all cases of tuberculosis. All of us occasionally take cold and phlegm or sputum gathers in the throat. None of us can be absolutely sure that we do not have tuberculosis. Therefore the only safe rule to adopt for all is to stop spitting and expectorating except into our handkerchiefs, or into vessels provided for that purpose. None of us should ever be guilty of spitting in our homes, or in public places, as public buildings, street cars, railway coaches, etc. If we must expectorate, let us use our handkerchief or a spittoon (which should be frequently cleansed). Let us all join the anti-spitting crusade. What has been said about spitting applies of course with double force to consumptives. If there would be no spit there probably would be no, or very little, tuberculosis. Every city should have an antispitting ordinance, unless prechance its citizens lead such ideal lives that such an ordinance is unnecessary. I hear some one saying, How, in this land of the free, do you dare to make suggestions that so curb our liberty? Let us remember, however, that liberty is not license. Liberty has limitations. "A man can say that he has the liberty to swing his arm as far and wide as he pleases. I say, yes, he can swing his arm as far as he pleases, so long as his arm doesn't reach the tip of my nose, or he may find out that the arm of decency and the law can reach the tip of his nose." Yes, a man can expectorate when and where he pleases, so long as he does'nt expectorate where his sputum may injure my health. Sputum should never be swallowed lest it set up a disease in the stomach or intestines. When coughing, the hand should be held before the mouth. We should turn away from a coughing neighbor.

We should avoid association with tuberculous individuals, especially if they are of an uncleanly disposition. This does not mean that every consumptive should be deserted. The consumptive in himself is not necessarily dangerous. He becomes so only by his habits. If he takes the proper care of his sputum and observes the proper rules of cleanliness, we need have little fear. The disregard concerning spitting in the past, has exposed every person to the dangers of consumption. If all are exposed, why is it that some of us become tubercular and others do not? Our body when in perfect health is provided with factors which will keep out disease-producing bacteria, and destroy those which occasionally gain entrance before they produce disease. The fleshy frame of every person is some time or other invaded by germs, but unless the soil is favorable, the seed will not grow nor will the plant thrive. The parable of the sower sets forth in an admirable way the story of the disease. The seeds that fall by the wayside are the bacilli that reach our great highways, the air passages and the intestines, in which they are picked up and devoured by the cells and other agents of the body, representing the birds of the air. The seed that falls on rocky places are the germs that enter the body and pass to the nearest lymph-node by which their activities are checked. They spring up, but having no depth of earth they soon wither away. Those which fall among the thorns are the bacilli which enter the various organs of the body. The soil is good but the thorns represented by the connective tissue of the system grows up around them and chokes the seed. This represents a curing of the process. But falling on good ground, with conditions favorable to growth, the seed springs up, increases and brings forth fruit, as represented by the sacrifice of human lives, some thirty, some sixty and some a hundred fold. These represent the well marked cases of tuberculosis. A part of the 13th chapter of St. Matthew, slightly modified. "He that hath ears, let him hear." What may we do to maintain that state of health which will successfully combat the invasion of the germs of consumption, or when entered will remove and destroy them? My answer is, Live up to the best rules of hygiene.

b. We should have plenty of fresh air. Our homes and places of business should be thoroughy ventilated. We should spend some time in the open air every day, the longer

the better, as a rule. Avoid close, stuffy rooms, and avoid dust as much as possible, especially that dust which comes from our dwelling places. A study of the distribution of tuberculosis, indicates that it is present as a rule in proportion to the housing of individuals. The Indians of the plains are not tubercular, but bring him into more civilized surroundings and he becomes consumptive like the white man. The scrawny, weather-beaten cattle of the wild west are far less tubercular than the well housed and well nourished stock of our barn-yards. Never permit the dust in our homes to be stirred up. The feather duster should be abolished, and the broom should seldom be used in a house. The dust may be removed from furniture by means of a piece of cloth slightly dampened with kerosene. Unvarnished wood-ware may be cleansed with a cloth moistened with water. If a broom must be used it should be sprinkled with some liquid as kerosene or covered with a piece of cloth which has been moistened. Women should not wear skirts that sweep the sidewalk, thereby carrying into the house dirt and filth that may produce disease. Sunlight should enter wherever possible. It kills the germs of disease, and so renders the air more pure. And with the sunshine from the heavens let in also a little sunshine from the soul. Encourage the faltering; cheer the discouraged. The pleasant word, the smiling face, the kind act tells on all our lives.

c. Our food should be plain and wholesome; avoid overeating as well as starvation. Pastries, puddings and too many of the so-called dainties should seldom if ever be indulged in. I trust that no one here belongs to that class called vegetarians. Although it is true that most of us eat too much meat, yet such things as eggs, milk and butter with occasionally a piece of good beefsteak are among the best things we can use to strengthen our system. Nor do I believe that there are any here who fail to eat their breakfast. Eating three times a day, although enough, is not too much.

d. Our living quarters should not be too warm, 60 to 70 deg. F. is sufficient for any one. Overheating causes us to become too delicate and very susceptible to taking colds. Our sleeping room should be more cool, although we should be well covered to keep thoroughly warm. So long as we avoid draughts there is not much danger of taking cold. Our clothing should be of such thickness as to keep us comfortably warm. It must necessarily vary with the time of year. Wet clothing and wet or cold feet should not be tolerated.

e. Exercise, especially out of doors in the open air, is stimulating and invigorating. It causes the blood to circulate more actively through every part of the body, and as it moves through the tissues it brings to them more nourishment and removes the waste products. It gives to the tissues more vigor and with it more resistance to withstand disease.

f. Avoid all excesses. Excesses may destroy in a few minutes what has been gained in years. Our sleep should be regular and of proper length. Eight hours a day is not too much for anyone. Intemperance in the use of alcoholic liquors should be carefully avoided. Few things reduce the vital resistance more rapidly.

People with a rather weak constitution, especially if descended from consumptive parents, should seek an out-door occupation. Stooped and cramped postures while sitting should never be indulged in.

If these rules of hygiene are carefully carried out the danger of contracting the disease become comparatively slight, and if once it has been contracted the chances for recovery are quite good. Encouraging, too, is that while all this is being done to fortify the system against tuberculosis, it fortifies it against disease of every kind, prepares it to more effectively discharge the duties of life and overcome the obstacles which more or less beset the path of every one.

These are good instructions you will say, but what about putting them into practice. Shakespeare in his "Merchant of Venice" causes Portia to say: "If to do were as easy as to know what were as good to do, chapels had been churches, and poor men's cottages princes' palaces. It is a good divine that follows his own instruction." This statement is probably as true now as it was in Shakespeare's time, but why should we not do our best?

Let us all remember that the cure of tuberculosis in its early stages is comparatively easy, but once it has advanced to the latter stages, there is little hope for recovery. If you have consumption, follow the golden rule, "Do unto others as you would that they should do unto you." Let us see to it that we observe with great care, these rules of hygiene—proper food, proper clothing, proper sleep, proper exercise, and moderation in all things, which are essential to our well being. Let us know that our homes and public buildings are properly heated, thoroughly ventilated and scrupulously cleansed. Let us ask ourselves to stop spitting and expectorating in our homes and in all public places. Let us ask our dairymen to keep only

healthy cattle, and to use the utmost care to preserve the milk which he brings to our doors in its original purity and freshness. Let us ask our teachers to inform the pupils in our public schools concerning the essentials of such disease as tuberculosis while teaching them the principle of right living. Let us beseech our public press, to use their weapons to aid in the crusade against consumption. Let us request our public officials to pass ordinances and adopt rules aiming at the restriction of this disease process.

If all these things are done then the time will probably not be far distant when not only tuberculosis, but many other infectious diseases will be not only materially diminished in number, but entirely disappear. Pasteur has truly said, "It is in the power of man to cause all parasitic diseases to disappear from the face of the earth."

A CASE OF TUBERCULAR STRICTURE OF THE ILEUM.

JOHN McHALE DEAN, M. D.

WITH PATHOLOGICAL REPORT

H. P. WELLS, M. D.

A REVIEW of the literature on the subject of tubercular stricture of the bowel will convince surgeons that this subject has been definitely neglected and they will appreciate my incentive to report the following case from my practice, which is interesting in itself, but doubly so because it illustrates a class of cases of which but few are recorded.

The patient had only recently arrived in this country from Italy, and could, unfortunately, converse only in the Italian language. I was, therefore, compelled to arrive at a history through the mediation of an interpreter of limited ability. The patient, H. G., was twenty-one years of age; height five feet four inches; extremely emaciated and very anemic. Previous history showed merely the diseases of childhood—pertussis, measles, etc. Family history: Father and mother living and enjoying good health. No history of tuberculosis in her immediate family, except a younger sister at present suffering from a well-defined case of cervical tubercular adenitis. Patient being a daughter of poor parents, the hygienic surroundings in which she was compelled to live were extremely poor.

Present history: On entrance to the hospital the patient complained of vomiting and colicky pains in the umbilical region. She called attention to the noises in the intestines, plainly audible at a distance of twenty-five feet. Patient weighed ninety pounds. Through the interpreter I learned she had been ill for the past six months with periodical vomiting and adominal pains. In the last three months patient had been bedridden. She has had periodic attacks of diarrhea, while in the interval of same her stools are formed and apparently normal.

On the day of entrance the patient was given a saline cathartic that occasioned severe vomiting and a copious diarrhea. She presented the appearance of extreme shock by subnormal temperature; cold, clammy perspiration and thready, rapid pulse. Stimulants and morphia improved the condition and patient expressed herself as feeling well again, but that she was certain of a recurrence of above, since she had had similar attacks every three days. The vomiting was first stomach contents, later mucus, and finally a stercoraceous type. The stools measuring about two gallons collectively were a pale grayish yellow in color and composed of mucus and pus. No food or other solid particles were found in them, while the odor was very offensive. Microscopic examination showed mucus, pus cells and coli commun bacilli. During the above attack, the borborygmus was very pronounced as well as the undulatory action of the intestines.

Physical examination: Patient pale, emaciated, skin delicate and fine, the temporal and superficial veins are plainly visible through it, expression bright but anxious; hair flaxen and eyebrows long and curved. Bony prominences and tuberosities could be clearly studied as the adipose and muscular tissue were extremely wasted. No enlarged glands palpable except in the inguinal regions where a fine chain of small glands could be felt. Chest narrow, and the fifth left intercostal space shows the pulsation of heart in normal location. Lungs showed no abnormality either by auscultation, palpation or percussion. Respiratory sounds consequent to patient's debility were feeble. Heart rapid, no murmurs elicited and sounds clear and distinct. Percussion showed normal cardiac area. Respiration costo-abdominal. Pulse varied between 100 and 120, and temperature showed evening exacerbations from 99.4 to 100 deg. The spleen normal.

Blood diminshed red corpuscles and marked leucocytosis, hemoglobin 50 per cent (Gower).

Urinalysis: Specific gravity 1012; acid; faint trace of albumen; no sugar; chlorides diminished; urea diminished; no bile; marked increase in indican.

Microscopic examination negative.

The abdomen presented an irregular outline. Coils of intestines from left to right

stood out prominently. By palpation I could clearly outline a large dilated coil of intestine that appeared in the region of the transverse colon. By deep pressure the peristaltic action was set up, causing the patient some uneasiness and pain. The excited peristalsis showed a motion from left to right, and the noises caused were plainly audible at a considerable distance. The end of the peristaltic wave was marked by a blowing sound that almost possesed the type of a whistle. No abdominal tumor or enlarged glands could be detected by deep or superficial pressure. Stomach analysis showed trace of HCl, and absence of lactic acid. Inflation with air showed it to be of normal size and brought out nothing abnormal. Patient's appetite was poor, she taking merely liquid foods by compulsion. Distension of the colon was successfully accomplished by air and water, meeting no obstruction and showing the normal distended transverse colon was situated anterior to the obstruction.

Diagnosis of partial obstruction of the ileum due to a probable tubercular condition was made. Exploration was advised and consented to.

Operation.—A median incision about six inches in length was made in the umbilical and hypogastric regions. The abdominal cavity showed no fluid. A large distended loop of intestine was encountered and on following it to the right a tumor about the size of a lemon was found. The mesenteric glands were enlarged in the region of the mass, and enlarged tortuous lymph vessels leading from the mass to the glands could be seen and felt. The tumor involved the entire lumen of the intestines. The intestine encountered was the ileum and the tumor was about eighteen inches from the cecum; it was not adherent and could be readily delivered outside of the abdomen. The large distended intestine was proximal to the tumor while the intestine distally was of a normal appearance. After the usual protective measures were instituted, the abdominal cavity being walled off by gauze compresses suitably placed, resection was performed. A portion of intestines, about six to eight inches in length, was removed, together with the mesentery and its enlarged glands. In cutting through the proximal distended loop of intestines the coats, especially the muscular, were so hypertrophied that the wall resembled that of the stomach. The enlarged loop's end was entirely closed by silk and catgut and with distal or small end a lateral anastomosis was made in the side of the closed proximal loop by means of a large size Murphy button, fortified by linen Lembert sutures in the usual way. The abdomen was cleansed, the mesentery sutured by cat-gut and the anastomoses dropped back in the abdomen, at the same time carefully covering the site with a fold of omentum. The abdomen was closed in three layers with catgut.

The recovery was rapid and uneventful; the patient sat up on the sixth day, and left her bed on the tenth day. Abdominal wound healing per primam. The vomiting, pain and borborygmus entirely disappeared. Appetite became ravenous. Stools well formed and move without medication.

In three weeks patient had gained five pounds and left the hospital. Six months later patient called on me at my office, having gained about forty pounds, and admitted that the week previously she had entered the hymeneal ranks. Her general appearance was splendid, appetite almost insatiable, and bowels moved normally.

In arriving at a diagnosis of the site of obstruction, the writer considered the periodic-formed stool of great importance. As to the nature it was surmised to be tubercular, because stricture of the ileum is most frequently tubercular.

I append the pathological report made by Dr. H. P. Wells, to whom I am indebted for valuable assistance in developing the pathological features of the case.

PATHOLOGIC REPORT.

Examination of the gross specimen shows a much constricted lumen which might be due to one or more of several conditions, viz., cicatrization of healed ulcers with their long axis in the transverse direction of the gut; thickening of the mucosa and submucosa from infiltration with inflammatory products; associated or not with ulceration; a diffuse infiltration of all the tunics of the gut wall, either by the specific inflammatory products of tuberculosis, or syphilis, or by some other chronic process with hyperplastic or hypertrophic increase of tissue.

Although the specimen came to my hand in a hardened state, it is judged that the lumen of the gut at the site of the lesion was so constricted to at times become impassable.

Proximally to the lesion the ileum ballooned out into quite a sac, measuring from 8 to 10 cm. in diameter in the fixed state.

The surface of the mucosa at the site of the lesion shows signs of ulceration for a space of about 6 cm. in the long axis of the gut and extending over its entire circumference. Proximally to the ulcerated area the surface of the mucosa presents a granular appearance, which was found to be due to the exfoliation of small patches of surface epithelium. This condition of the mucosa was not seen on the distal side of the ulceration.

Cut longitudinally and spread out the specimen has the appearance of a palm leaf fan; the strictured or distal portion forming the handle, and the dilated or proximal portion forming the leaf of the fan.

In the orientation of this specimen it is observed macroscopically that the section of gut removed probably goes well into normal tissue, at least as far as the specific inflammatory process is concerned. This observation was confirmed subsequently by sections which were removed from the extremes of the specimen, proximally and distally. Other sections for microscopic study were removed from the center of the obstructing mass, and included the entire thickness of the gut wall. Another was taken from the mesenteric side, including the full width of the mesentery from the gut to the cut margin, where it was separated at operation.

The sections removed from the upper and lower extremes of the specimen presented the following points of interest: the surface epithelium was stripped off from the mucosa in places, or rather was only found in places, the most of it being absent; the mucous and submucous coats were slightly infiltrated with round cells, with occasional eosinophiles, and occasional collections of masses of round cells; the latter being neither lymph nodes nor incipient tubercles, as was shown by the absence of epithelioid cells and the presence of eosinophiles. The serosa was normal in this location as far as could be judged from these sections.

There was marked hypertrophy of the muscular tunic, as could be easily seen macroscopically this hypertrophy being slightly more marked in the proximal than in the distal portion. The section removed from the center of the obstructing mass, and including the entire thickness of the gut wall from its lumen to the serosa, presented the typical signs microscopically of tuberculosis.

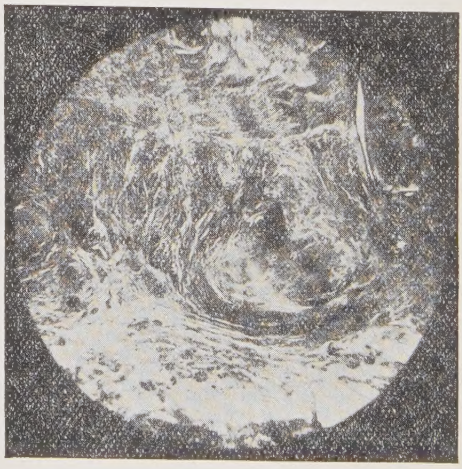
Instead of a mucosa and subumcosa were found an immensely thickened mass of round cell infiltrated new formed tissue, with here and there caseated areas, and remnants only, of a gland structure.

The submucosa was entirely obliterated and the inner or circular layer of muscle was so thickly infiltrated with round cells that the higher power objective was required to make out the proper structure of muscle at all.

Between the outer or longitudinal layer of muscle and the very much thickened serosa typical tubercles were found in abundance. An interesting reference made by von Bergmann, Warren, and I believe one or two other authorities, to the muscle wall of the intestine as a barrier against the progress of the tubercular process from one to the other side of the gut wall, or in other words, its efficiency in confining the inflammatory process to either the mucous or serous side, depending upon the sources of the initial involvement, is in this specimen apparently controverted. It will be seen by the micrographs here presented, especially in No. 2,

Cut No. 2.

that a tubercle was found lying within the outer layer of muscle, entirely surrounded by muscle fibers, and being so distinct from the surrounding areas of cellular infiltration as to indicate that the tubercle developed in this location, and did not merely extend into the muscle wall from the subserous region. While in micrograph No. 1 is seen a tubercle



Cut No. 1.

originating in the subserous structure pushing its way into the outer layer of the muscle

wall. The giant cell is beautifully shown in both these pictures, with the deeply staining and numerous nuclei piled up in one pole of the large mass of protoplasm of the cell.

The lighter areas of caseous degeneration are seen in the tubercle shown in photo No. 1, this being due to the failure of the degenerated cell to take up the nuclear stains.

The tubercles found in this section were, as above mentioned, principally in the greatly increased serous connective tissue, and in these distinct tubercle formations the epithelioid cell was plentiful, but the greatest infiltration was in the mucous side of the wall. The epitheloid cell was also present in this densely infiltrated area, but more difficult to distinguish because of the great preponderance of round cells and leucocytes.

It is noteworthy with respect to the statement of von Bergmann and others given above regarding the resistance of the muscular tunic, that in the section just described the outer longitudinal layer of the muscle was intact throughout excepting at the points shown in the micrographs, where the tubercles have invaded. By saying intact I do not mean normal, as there was extensive cellular infiltration throughout, but not of a specific character.

The site of greatest frequency of tubercular lesions of the intestinal tract seems to be the region of the ileocecal junction.

This fact may be explained by the mechanical conditions here existent, viz., the acute angle at which the ileum joins the colon, and the consequent tendency to stagnation at this point in the fecal circulation. Another explanation forwarded is that the acid reaction of the upper part of the intestinal tract serves to inhibit the activity of the tubercle bacillus which finds its way into the bowel through swallowed tuberculous sputum, or infected food or drink, but as it travels on to the lower bowel and the reaction of the sections become alkaline, this inhibiting influence is removed and infection may occur. This ingenious theory is somewhat disturbed by the well-known acid resisting properties of the tubercle bacillus, but whether this quality of the germ obtains in a biologic sense as it does in the more mechanical sense as applied to its staining qualities, is of importance in this connection.

Tubercular ulcerations of the intestine, it would seem, are by far more common than is popularly supposed, as seventy per cent of cases of phthisis that come to autopsy are found to have intestinal lesions of tubercular character. Whether it is ever a primary disease or not seems doubtful from the evidence of statistics compiled on this subject. Eisenhardt, who made a thousand autopsies on patients who had died of some sort of tuberculosis, found that out of this number 563 had intestinal tuberculosis, and in every one of these 563 subjects, pulmonary tuberculosis also existed.

As to the frequency of stricture in tubercular lesions of the intestines, Eisenhardt calculates that it occurs in about 25% of all cases. Hofmeister in 1896 collected 100 cases of tubercular stricture of the intestine in its various portions. The general types of intestinal tuberculosis are the following: the disseminated form, without tendency to recovery; the localized form with tendency to cicatrize, and tubercular lesion of the ileocecal region with the formation of a distinct tumor. The latter may be again divided into the mucous and submucous, and into the serous and subserous varieties, according as the source of infection is from within the intestine or from the mesenteric glands by extension from a tubercular processes elsewhere. This latter subdivision is mentioned principally by those who call attention to the resistance of the muscular tunic against the progress and extension of the tubercular process from one to the other side of the gut wall.

Some recent research along the line of source and route of infection has endeavored to show that instead of the bowel becoming infected as a secondary process from a primary lung infection, the matter stands just the other way, and that the intestine is first involved, the lung becoming secondarily affected through the lymphatic circulation.

2313 Washington Ave.

Succeeds Nothnagel.—Nothnagel's chair in the University of Vienna is to be filled by von Noorden of Frankfort-on-Main.

For Pure Food.—The legislature of Iowa has recently passed a law providing for the annual appropriation of $10,000 to go to the support of a pure-food laboratory.

Missouri Valley Special to Boston.—Arrangements have been perfected for a superb special train to Boston, to attend the meeting of the American Medical Association, June 5 to 8. Route: Grand Trunk, via Niagara Falls, Toronto, Montreal, Thousand Islands, daylight ride down the St. Lawrence iver, returning by rail. One fare, plus $1, for round trip. This train will run special through from Chicago, and will be made up of Pullman palace sleepers, dining cars, buffet-library and observation cars. For reservations and itinerary address Dr. Chas. Wood Fassett, Secretary, Medical Society of the Missouri Valley, St. Joseph, Mo.

SELECTIVE ABSORPTION BY THE CELL.

WILLIAM F. WAUGH, M. D.

CHICAGO, ILL.

THE blood-vessels and collateral channels of the circulation carry to every part of the human body, to every cell of the countless number that make up our frame, one common nutritive fluid. From this each cell takes up that which it needs, letting the rest pass by. But what does it need?

If the cell is exactly equilibrated, if it stands in need of nothing, it takes up nothing. But if any element for which the cell has use is present in less than normal quantity, the cell takes up enough of that element to restore physiologic equilibrium.

There is a selective power displayed here, for the cells each takes up substances differing according as their respective functions and constitutions differ. Accordingly we find the nerve-cell taking up phosphorus, the bone-cell lime, the muscle-cell iron, etc. One cell takes a substance for which it has need, passing by other substances which other cells need and take. Is each cell a distinct, conscious entity, and is the selection a voluntary one? Or is the whole process governed by a wonderful system of complex, interdependent automatism? There is here an enticing field for conjecture and card-house building, unrestrained by the trammels of real knowledge —the fancy may have full sway.

The substance thus absorbed from the circulating fluids by the cells are usually denominated foods. Foods may be defined as those substances required by the cells to support their structure and sustain their functions. The need may be for a molecule of fat, sugar, albumen, salt, acid, water, lime, soda, iodine, phosphorus, etc.

But the need is not necessarily for material always. It may be that there is a defect in tonicity in the cell, and the need is supplied by a molecule of strychnine; and in that case the cell takes up the latter exactly as it did the other substances for which a need was experienced. Or, the need may be such as is met by a molecule of aconitine, or veratrine, or digitalin—the cell absorbs what will satisfy its needs as felt at the moment.

But, these are medicines!

I would like to have a definition of foods and one of medicines that would distinguish these. There is evidently no hard and fast lines between them—is there any line at all? Is iron a food or a medicine? lime? manganese? acetic acid? phosphorus? iodine potash? It has been suggested that a food is a substance the need for which is constant, while a medicine is needed occasionally to fulfill a temporary want. The writer, like some others, has a decided craving for a meal of sauer kraut about once in a winter; but would not care for it three days in succession (it is always on the second day, you know). The man who attempts to eat a quail a day for forty days soon finds that his need for quail is only occasional, not constant. Sauer kraut and quail, therefore, are not foods but medicines!

There is no definition that establishes an essential, or other than a scholastic, difference between foods and medicines.

We have seen that each cell takes what it needs, and leaves what other cells need and take. What is there impossible then in supposing that when we place several medicines, apparently antagonistic in their action, together in the circulation, each cell may take the drug it requires to restore physiologic equilibrium, leaving the antagonisic agent unabsorbed for the cell that needs the latter? To deny the possibility of this would be to erect a dividing wall between the foods and the medicines which we have been unable to so separate.

We speak of antagonistic drugs, but in truth it is a question if there is a really and absolutely antagonistic couple in the materia medica. One drug may excite and another restrain a secretion, like the sweat; but it will be found that one stimulates the sudoriparous gland while the other restrains the flow of blood to the skin, or acts on some other structure to check the flow.

The importance of this discussion lies in the fact that when we come to study the phenomena of disease we find antagonistic conditions present in different parts of the body. Take as the most apt example the oft-quoted case of hyperemia: The presence of an over-supply of blood in the capillaries of any part signifies a loss of the moral tone of its vessels, which admit the surplus blood by distending. This constitutes a vasomotor paresis. But as there is no reason to suppose that the entire quantity of blood in the body has been increased, this over-supply here must be compensated by an under-supply elsewhere; in other words, there are other vessels not normally full, their lumen diminished, their walls therefore abnormally strong as compared with their contents, the balance between the centrifugal and centripetal pressures lost—they are spastic—vasomotor spasm is present.

Strongly favoring this view is the fact that it fully and for the first time explains the good results following the application of the diametrically opposite principles in the treatment of the hyperemic maladies. How else can we explain the excellent results ob-

tained in pneumonia by those who use the vasomotor constrictors, strychnine, digitalis and ergot, in maximal dosage; and the equally favorable results reported by equally credible witnesses from veratrum, venesection, antimony and aconite? Especially as either of these succeeds far better than the middle-course people who do neither, but rely on rest and non-interference? According to ths view the one who relaxes the spastic vessels and allows the blood to flow out of the pyheremic tract, and the one who contracts the paretic capillaries and forces the superfluous blood out, equally meet the indication and afford relief.

Burggraeve went a step further, and recommended that both principles be applied at once, taking the view above suggested, that the paretic cells could take up a tonic like digitalin or strychnine, and the spastic cells a relaxant like aconitine or veratrine, at one and the same time. If this be correct, it is evident that be have here a more effective method of treating hyperemias than either principle as applied singly affords.

The a priori reasoning leading up to this conclusion is faultless—it remains to apply the supreme test of clinical trial. There is a mass of evidence on the affirmative side, and little if any on the negative. But it is fortunately a case in which every physician may himself be judge and jury; where none of us take any other man's dictum, for we may one and all put the theory to the test of practical clinical application.

Give together aconitine to relax spasm, and digitalin to contract atony; adding strychnine when the vital depression predominates or veratrine when the excitement of the circulation and respiration pass the desirable limits, and the elimination is notably defective; changing from one to the other of these adjuvants as the symptoms indicate, but clinging to the two first named. Give each to produce the desired effect, not by the rigid dosage of the books. Treat the patient and meet the conditions presenting instead of giving a set formula for the name of the malady.

For the convenience of those unfamiliar with the agents and methods here advised, the following suggestions are added:

Of amorphous aconitine, give half a milligram—gr. 1-134—every ten to sixty minutes to an adult, until the fall of the fever or of the pulse-rate, or the evidences of breaking up of the fever, indicate a sufficiency of the remedy; then give less frequently so as to sustain the desired effect.

Of Germanic digitalin so-called—really digitalin—give a milligram—gr. 1-67—every half hour till the heart is regulated, its rhythm uniform, and the hyperemic vessels are restored to normal tone as well as may be ascertained with our present means of observation; then regulate the dosage to the needs as with aconitine.

When the evidences of vital depression are manifest, as in asthenic pneumonias, add strychnine arsenate, half a milligram, every ten to sixty minutes until the desired evidences of restored tone and reaction are manifest; then as before, regulate the succeeding doses according to the needs.

When the heart is tumultuous and the eliminants are clogged, as in sthenic pneumonias especially, add to the basal aconitine and digitalin the powerful and safe veratrine, half a milligram every half to one hour—much oftener in eclampsia—until the softer pulse, or slight nausea or laxation, evidence the full desirable action; then as before, less frequently. It is quite possible that we one day find the veratrine indicated and the next day find the depression so predominating that we change to strychnine; and perhaps next day go back to veratrine.

The application of such a system demands of the physician a close and discriminating study of the phenomena developing in every case. There is no prescribing en masse, no stretching every patient on a procustean therapeutics. Is such a necessity really to be regarded as an objection to the method?

What bearing would the admission of this selective action have upon the question of the status of the cell. Is the cell an independent, conscious entity, governed by its own volition, or is its function wholly directed by chemotaxis?

Let us begin with the ameba, as it is found floating free in water. Transfer it to the slide of the microscope, aud we see it move, extrude its pseudopoda, etc.—an independent, complete being, its life processes and reproduction exerted by itself as a separate being and not as a part of or dependent on any other animal or organism whatever. Between this and the highest type of animal there is no place at which a line can be drawn, separating these governed by conscious volition, and and those which are not so governed, which dividing line is natural and evident, not arbitrary.

Place beside the ameba on the microscope slide a white blood cell; and see if the two can be distinguished. What can be said of the one that can not apply equally to the other? They are indistinguishable in every respect.

If we cannot draw our line between the ameba and the leucocyte, still less can we draw it between the latter when floating free in the water on the microscope slide, and

when floating in the blood serum. Change of environment does not constitute a reason for transfer from one primary class to another. For the same reason we find it difficult to make the dividing line between the leucocyte and the same cell when it has assumed a stationary position as part of an endothelial wall. Nor between that and the epithelial cell; nor that and the other cells of the body.

The hypothesis of chemotaxis seems to be generally accepted, as the preferable working one for the phenomena of cell action; but rather from an unwillingness to admit the alternative hypothesis of independent cell volution than from any special testimony. But of the two the latter seems to be at least the most convenient, since we find writers constantly employing its language to describe the conditions presenting. And this is the more significant in that it is usually done unconsciously.

THE RELATION OF MAN TO NATURE (A STUDY PROMPTED BY "TESTIMONIES OF THE SEPULCHRES").

ALBERT S. ASHMEAD, M. D.

NEW YORK.

TWELFTH PAPER.*

God, in short, according to the theistic doctrine virtually addresses each human being thus: "I have made you in order that you should be perfect, even as I, your Father, am perfect. My love for you, and my desire for your perfection are so vast, that you yourself individually, might be the only thing made by me, and the whole end of creation might be the welfare of your single soul. Moreover, My power and wisdom being equal to My infinite love for you, all the processes of Nature with which your existence is connected have been ordered by Me in the way best fitted to endow you with all the faculties and dispositions necessary for the kind of life that I require of you, and with the circumstances which will best enable you to bring them to full development."

But what are the facts of this evolutionary process in reality when considered in relation to the individual human being? Do they show that the intelligent God of evolution possesses a character to entitle Him to use such language? The evidence afforded by the cruelties of Nature show that the controller of nature cannot be wholly benevolent. The realization of preconceived types of the human race could not be called benevolent to human beings as such. For the majority would be failures. And even if the final result was order and beauty, the means employed by the Omnipotent Designer would be terrible. This was the argument of Romanes. If God, therefore, be omnipotent, why did he not arrange that all men should be spiritually perfect from the first, instead of requiring evolution to make them perfect?

Bishop Gore says: "If the world is scandalized by the slow development and slow spread of revealed truth, the church has an answer which is as complete as it is short and gentle. 'You are ignoring,' says the church to the world, 'the gradualness of the spirit's methods.' The apologists of Russian autocracy might, with just as much reason, answer those who condemned the recent massacres in St. Petersburg, by saying, 'You are ignoring the violence of the Little Father's methods.' The answer which the world makes to the church is this: We are not ignoring the gradualness of the spirit's methods at all. The gradualness of the methods is precisely which we criticise and arraign." In fact the church instead of refuting the criticism of Darwinian science against the moral methods of Nature, merely relates it in a more precise and more appalling form. The more fully it is admitted this deliberate purpose on the part of an Almighty God is revealed in the evolutionary process, and the more clearly it is realized that the birth and growth of Christianity is an example of the same process, the more hopeless becomes the task of reconciling that process with the conception of a Christian God as good, or with whom man has any concern at all.

Pascal wrote more truly than he himself knew when he said, "Whoever judges of the Jewish religion by its coarser forms, will misunderstand it." The spirit of this remark should be applied to all religions, to all peoples, to every individual. Pick out the best, around which all can rally, and altruistically save it by weeding out and away with the weeds—as far as the law of evil will permit. At least have charity. Why agnosticism should, as Mr. Dickinson says, be "devoid of enthusiasm of delight," I cannot conceive. Let us not sit crying for the moon, while "the wonder and wealth of the mine" lies unopened at our feet. There are indeed besides, other things of value in the universe besides happiness and joy, and these things are often forgotten by those who argue for suicidal pessimism on purely hedonistic grounds. But one part of virtue itself is the temperament by the strength of which a man accepts the inevitable. Temperament is a quality; a

* The first paper of this series appeared in the MEDICAL FORTNIGHTLY issue of April 25, 1905.

constitution not an acquisition; the temperament that times experiences "high states of exaltation" will by operation of the law of its form experience states of deep (more or less, depression—reactions; or will commit in discretion, and be penalized. And the world will call it Free Will.

Man from the first has been acquainted with agreeable and disagreeable sensations. The former he called "good," the latter "evil." And these names were extended to what caused these sensations, so that they came to cover ethical qualities, then abstract principles, which in time became deified and demonized respectively. In this way God and the Devil came into being. But the natural tendency to exaggerate the importance of that which we like over that which we dislike led to the creation of an absolute personal God pure goodness, a conception impossible to reconcile with the counter principle of evil. All attempts to resolve this contradiction has been futile. Milton imagined envy to have crept into the quiet breast of an unchanged. Others tell us that evil is a purifying process, which will cease when its work is done; but good and evil are coeternal and each necessary to the existence of the other. But evil is not necessary if God is omnipotent goodness! Some writers speak of "the divine nature in which God at first made us" as having been lost. This is mere assumption. And they say further that there is nothing "so sure as that God is love and is ever seeking to draw men out of their fall into oneness with himself. This is a most surprising statement. What a weak inefficient God! They say that war cultivates this mystery like that of music, the Grail, the love-feast and withal Olympus and Elysium of the industrial age. Where the gods walk, the dryads dance, fauns frolic and Persephone gathers her flowers. The lovers of the beautiful—alas for our modern folly—are banned the guest in their crafts; but they may not snatch an hour at the keyboard or fiddle-bow and behold her floating before them in a haze of falling notes—because it stirs the pulse of valor; merriment, for it may be the very soul of dance; religion by its deeper song of one kind with conscience, and the sacred emotions. But must we overleap the conscious life, which neither number nor matter in any wise explains. While science points some promising lines of research and philosophy accentuates the certitudes of intuition in a day when ratiocination alone has respect.

Without the whisper of a sound the mind can set in motion a melody never heard; and once shapen, it seems a thing inevitable, organic, alive. But music like life is the interplay of rest and unrest. From one key of size or sentence to another it is conceivable that the life may pass as naturally as the electric message through the air. To those, then, who dogmatically assert that there is no life save in this little ferment of oxygen and carbon, where into our senses are keyed and co-ordinated, it may safely be replied that, on the contrary, there may be life, sentiment and intelligent within and without us, as actual and assured as our own, we to and it to us as tennis aura thin air, unintelligible, unseen and unheard. The brain is indeed a cosmos like the universe; conscience makes the vortical stability of the conscious, life; the moral laws are the inward counterpart of those outward laws, which materialistic monism, a philosophy more aptly described as immoralisim (unmoralism) calls it mechanical process, in which we may discover no aim or purpose whatever, an eternal fluctuation with no trace of a moral order.

As Newman Howard says, "It was a great saying of a great modern scientist that the universe was (is) infinite in an infinite number of ways." Then the polyhedral limitation may be limitations only of our intelligence. And in that case in all the successions of music of soul, so palpable and perfect to the inner sense, we may be spelling out new laws of a new being. It is a guess, a wild guess, perhaps; yet, whatever may be the undiscovered which squares the inequations of life, when we learn that music, the felt reflex of the soul's rightly regulated emotion, is also a mirror of the central universal laws, we may put aside the arid and hideous prospect of materialistic immoralism (unmoralism) and gain assurance in the swift certitudes of intuition, believing not without proof, that 'beauty is truth, truth beauty;' that is all ye know on earth and all ye need to know."

Curiosty is not only a principle that leads to knowing, but a principle and process of growing.

Truth is a kind of reality characterized by the phenomena of growth and of becoming; it does not admit of ultimate definition. To that right is no characteristic striving of a class of men. It is a common aspiration. Only the stuff of thought is most intractable, formless, like some milky way waiting to be analyzed into distinct star-forms of definite ideas.

Is time an element in evolution? Some thinkers say that Time, and they say perhaps rightly, is an illusion. They have only to press this to extremes, and presently they will become unwilling to catch a train, or to ask what o'clock it is. How paltry." It does not follow that because our life and that of

the animals are branches of one fundamental vitality, we are wrong in speaking of different races of men and discriminating them from quadrupeds, and fishes and birds. May it not even be just as variety of matter exists, so it is not unlikely that variety of spirit exists.

Truth cannot but be the breath of the nostrils of every genuine scientific man. That which is not true, that is that which contains no element of truth cannot but be bad and hideous. Herbert Spencer says: Debarred as we are, from everything beyond the relation, truth, raised to its highest form, can be for us nothing more than perfect agreement, throughout the whole range of our experience, between those representations of things which are distinguished as ideal, and those presentations of things which we distinguish as real. Man can drift like other animals and often does; but we can also obey our own volition. But how do we know that we have volition? "Our ancestors invented legends to account for our kinetic psychology, legends of apples and serpents and the like," says Sir Oliver Lodge. But the fact is there, however, it be accounted for. The truth embedded in that old Genesis legend is deep; it is the legend of man's awakening from a merely animal life to consciousness of good and evil, no longer obeying his primal instincts in a state of thoughtlessness and innocence—a state in which deliberate vice was impossible." But the reasoning is very weak and unworthy of the writer, unless it is to be regarded as an admission that God is the cause of misery on earth.

The universe is in no way limited to our conceptions; it has a reality apart from them; nevertheless they themselves constitute a part of it, and can only take a clear and consistent character in so far as they correspond with something true and real. Whatever we can clearly and consistently conceive, that is ipso facto in a sense, already existent in the universe as a whole; and that, or something better, we shall find to be a dim forshadowing of a higher reality. This is the creed of Sir Oliver, and optimistic though it be, he says, it seems to me the only rational creed for a man of science, who, undeterred by any accusation of dualism, realizes strongly that our entire selves, our thought, conceptions, desires, as well as our perceptions and our acts are all "but parts of one stupendous whole, whose body Nature is, and God the soul."

This optimistic creed does not relieve God of accountability for all the terrible distresses on earth. He is the cause. Variety of spirit exists; ergo the spirit of evil exists. Truth is a relative fact, whether the fact be good or evil. Truth as an ideal is never reached, is always relative. The Eden allegory is to show that the ideal life was destroyed by the Creator—that is to say, is impossible under the law of God—of Nature; and that man "a passenger on the planet" was smashed by forces over which he had no power of resistance. It is absurd to say that he there awoke to a new sense, except that he was a victim of misplaced confidence. There are two forces—good and evil, and man is a ball tossed between them.

The belief in miracles, in heaven, in an atonement—regarded popularly as the washing away of the stain left upon the world by past evil—are beliefs by which religion seeks to justify its conviction that of the world seen as a whole it can be truly said, "Behold it is very good." Whatever may be the ultimate truth about space and time, to the imagination at any rate these are indispensable forms. Catholicism produces in its adherents a certain aristocratic temper founded on fact, half on sentiment. The Catholic Church is built non sine numine, we may believe, on a long and intimate knowledge of human nature. Her sacraments, her ritual, her liturgy compass our life from birth to death with an atmosphere of blessing; her hands, like that of the spouse in the Canticles, drop with myrrh. Be her shortcomings what they may, she appeals strongly to the feelings and the imagination; separation from her involves too great a strain to be undergone with impunity. Were we called upon to plan a religion for ourselves we could no doubt, frame one on larger lines. But our lot is cast with that of our fellows; our position is inherited, not made.

As to the problem of evil. Christian theology is involved in a plain contradiction in ascribing evil to the will of a being, who is all-powerful, all-good, and all-wise. If people insist on asserting that "God is all," "God is good," we must accept the conclusion that follows, namely, "there is no evil." Those who insist that God is all, must accept the devil as an aspect of God, or deny that God is purely good.

God, according to some, allows evil, in the sense in which a good father allows a headstrong son to learn from experience. But here it is forgotten that the power of the human purest is limited by external conditions over which he has no control. If these same external conditions apply to God, then God is not all. This argument holds up to the light the goody goody rot, that has been long fed to the world. As to the atonement, we have as facts the express assertion of the sufferer, that the "Son of man," came to give His life a ransom for many, and the declaration of St. Peter, that Christ also suffered for

sins, the just for the unjust, that He might bring us to God. The suffering then is real, and a definite purpose for it is assigned. These two are linked together, the suffering and the benefit. In such eternal justice demanded of offering of the cross and passion of Jesus the Son of God, the most extreme undeserved suffering, resulting in this most supreme blessing, is there not found some hint towards the understanding of the cruelty of Nature? "And," say the theologians, "may not all undeserved suffering be part of an eternal law, by which the greatest possible result and blessing is secured?" Such rot as this is painful.

Geddes in his Synthetic History of Biology, shows how morphology and physiology, follow the logical path more and more penetrative analysis is associated with the synchronous perfecting of instruments. The intact organism, the component organs, the web of tissues, the individual cells, the intricacy of protoplasmic structure, every one knows how far descriptive analysis has gone on each of these levels. He points out how the morphological view was broadened and deepened by excursions into the remote past, and the distant present, by studying things in situ, by penetrating into the invisible. One of the striking results was the transition even in morphology to a kinetic point of view.

"Rest and fixity of form seem only to exist apparently, or for transient moments in the history of natural events; and even the finished and recurring structures of living beings, which appear to our eyes to be possessed of so much finality, and sometimes of so much finish, owe these qualities only to the comparatively short space of time during which we are permitted to gaze at them, and to our ignorance of the slow but endless changes to which they are nevertheless subject. The morphological view also took note of the relatedness and apparent recurrence of definite forms called types, of the so-called fixity of species, and the succeeding characteristic periods of creation, and sought to explain these morphologically; i.e., it sought in the abstract forms—sometimes geometrical, sometimes artistic—the key to an understanding of the recurrence as well as the continued variation of definite types. But the relationship was mostly looked upon as ideal not real." It is thus difficult to impose logical schemata upon history. It is hard to punctuate history. The swing of the pendulum is between vitalism and materialism.

Liebig, Johannes, Müller, Bichat, Claude Bernard, Lotze and Dubois Reymond are masters of morphology. But by their teachings even have we come any nearer an answer to the question, What is life? We thought so, a generation ago. But closer scrutiny convinced us that we have not. The specter of a vital principle still lurks behind all our terms. Neither the physiological, nor the psychological unity is intelligible to us. The dilemma of pure mechanic and the vitalistic biologic theories leads on to the psycho-physical view of Nature.

Though we speak as if God himself could not alter "the course of Nature," yet we ourselves constantly alter the inanimate processes of Nature, and though we too readily ignore the daily and hourly influences of our evolution, we do not recognize that they are beyond the pale of our science, or that some of them are inside the universe of fact.

Prof. Geddes and Prof. Thompson pointed out that science is an intellectual attitude rather than a body of facts, and that though the ideal biologist, poet, philosopher or theologian in interpreting scientifically the nature, continuance and evolution of life, arrange them in ordered series, to detect their inter-relations and likenesses of sequence, to reduce them to simple terms, to find their common denominator, and finally to sum them up in a general formula, unfortunately called, too often a "law," we must not delude ourselves by imagining that the "law" is an explanation of the facts formulated.

Why is God so slow and vague? The Presbyterian Rev. John Kelman knows! He says speaking of our sacred books: "So far as we have gone, the history of the past, viewed by the light in which the newer conception of the Bible has placed it, shows that at the present point in the progress of thought, science and religion are not in the least degree at strife. They need no reconciliation. The facts are God's facts, and the scientific knowledge of them is God's ever new and wonderful revelation, unfolding itself not in one book, closed two thousand years ago, but in every book written today, by any honest and competent investigator."

In the Philosophy of Ignorance and in Christian Pantheism which appeared thirty years on "The Mystery of Matter," Mr. Picton's professions in his Religion of the Universe are in substantial agreement with the worship of the "Unknowable," as set forth in Spencer's First Principles. He is much more theistic than Spencer's agnosticism presents. He claims that we can know God by progressively learning what He is in relation to man.

He objects to a God as "Ultimate Cause" of the universe, as "cause" means antecedent phenomenal conditions of events. But he refutes materialism when he thinks of the universe, as ceaseless interplay of impressions

made on us, by a life. What is this but to represent self-existent life as metaphysical causality, as much as that which the theorist ascribes to God. Mr. Picton, in a Spencerian mood, allows of moral freedom, when he holds that the self, which wills is a metaphysical reality of some sort. He assents to it, that this self is free in its moral self-determinations. He maintains that the essence of moral evil is sin against God, involving responsibility and deserving praise and blame. We are so enmeshed and involved, he says, in untraceable relations to our true and infinite self, that it is impossible to say how far we are only taking our part in the action of universal will. How far then can moral evil, or sin against God have a real existence?

The problem of existence by light of Aryan wisdom, practically allows us to imagine that our own philosophy, and our own religion, which have their roots in Greece and Judea, exhaust the thought of the world. And this they do, for they have filtered down the ages, into our common stock of thought. The voice of old friend Jacob is heard from the far East, in the story of "Satan" and our "first parents." A moral and personal God is found, in an omnipresent, omnipotent, omniparous and omniverous essence, or ether, for while all spring, in which all have being, and into which all disappear at their dissolution. The soul, having come into individual being at birth will continue to exist forever. Immortality is inseparable as attribute of soul. It passes to eternal bliss or woe.

The Aryans believe that the wheel of existence goes on forever without beginning and without end, remorselessly grinding out good and evil, joy and sorrow, and that the thing to be aimed at is for the individual to escape from it, and to pass into the still region of a Nirvana, where beyond these voices there is peace. Thus consciousness of self is lost. Self-consciousness is the root of worldliness. Desire nursed by ignorance, is the Hindu equivalent of that carnal mind, to which the delusion of evil is due. How this delusion comes about in a world in which all is god and all is good, we cannot explain. And we are not able to accept the explanation offered, that evil is due to a delusion of the devil, and that the devil does not exist. The permanent elements of religion are those that satisfy human needs, e.g., in idealizing the baser facts of the animal life, supporting the mind against the terror of the mystery of life, and strengthening moral weakness. The justification of religion lies in this service, rather than in any revelation of objective truth.

Herder in Germany, had ambition to free himself and others from the numbing tyranny of the rules and formulas which attached to the poetry, the history and the theology of his days. Germany was in the hands of the so-called men of enlightenment—the writers who supposed that all the previous ages of the world were dark ages, and that their own was the first in which the full light of reason had shone on the human mind. This was a light, however, which, as they further supposed was enjoyed only by the few, namely, themselves. In their views reason consisted of certain clear and definite principles divinely planted in the mind and heart of every man and existent from all eternity, even if only now for the first time fully understood. Herder was not dazzled by Rousseau's pictures of a primitive age of peace and innocence which never existed. We may thus see, he said, as freshly today as when the poets first expressed in their interpretation, the hopes and fears, the thought and emotions, every people, standing out against the dark background of its actual history. Each age must be judged by its own own surroundings and its own aspirations. As men could conceive of no beings very different from themselves, so they made their gods and angels in their own image, and represented them as magnified men. He called this ideal in one word: Humanity, and its great progress led to a great end. Ideal men and nations were dependent on their physical surroundings. He spoke of men who nursing a high ideal and straining after it, with irresistible desire see it dashed to pieces before their eyes. Men of this kind, he said, hide their trouble from their friends, and keeping the sad secret in their heart die a slow death. This he termed a subtle form of suicide, of which only the elect were capable. All the changes in the world, as Schopenhauer held, have only been fresh combinations of the same facts like the shapes taken by the bits of glass in a kaleidoscope, interesting doubtless, but exhibiting no trace of orderly development. Throughout all his speculations he never lost sight of the principle of evolution.

Herder in Germany was the one who gave effective stimulus to that general tendency to inquire, that spirit of Forschung, continued in many directions by Goethe, in philosophy by Hegel and Lotze, in history by Niebuhr and Ranke, in theology by Strauss and Baur, in law by Savigny, in natural science by Baer and Humboldt, a tendency which spread over the civilized world, and which in religion is just beginning to be dominant.

Over and over again in the development in religion as in other things the course taken

by Christianity was not that of Christ's religion, but was taken backward.

In the problem of immortality there was the question of future fact of what is to be, as Tennyson voicing the common sense of the race states, Does our individuality endure? And there was the question of fact of what is: Do we share in an eternal life, and does the connection become a matter of experience? If man is a reproduction or differentiation of the eternal mind, and so partaker of an eternal life, it does not follow that regarded as an individual spirit, he is eternal. And if this metaphysical tie is what gives absolute value to human life the thing of absolute value might remain, while individual spirits were extinguished, provided the race continued.

The mystery of this unfathomable universe is one that the plummet of our thought will never sound. But at least we can avoid, and as an intellectual duty we are bound to avoid, plain and palpable self-contradictions. We cannot assert in the same breath the reality of evil and the fact of creation by an omnipotent, omniscient and benevolent being.

Neither Greek philosophy nor Persian religion were subject to a like embarrassment with our theology. The one assigned evil to an active principle, the one to the intractable nature of matter, tthe other to a malignant spirit.

Our theology says: "God is all," "God is good," therefore "all is good," or in other words, there is no evil. Our Christian theism must deny one of the premises. Must we deny that God is good? Yet we can worship a being partly evil. Or, we must deny that God is all. This means that we must give up, making religion into a theory of the universe and regard it as a passion of the heart.

Now for the conscience to condemn God, is a peril to religion, and not to condemn God is a peril to morality. Is it the God of Nature revealed to us by science, or the God whom our heart reveals to us?

We must choose between these. And yet how one sided and untrue to fact, says St. George Stock, if addressed to the God of Nature. For to nature belongs the ugly equally with the beautiful, the awful and sinister as well as the benign; the howling wastes of blackness as well as the sunlit pastures.

Dr. Jethro Brown in his Passing of Conviction, says "I well remember how when I was a boy of about seventeen, and a devout ardent Christian, my faith sustained its first shock from a study of Greek philosophy. I had always been given to understand that before the advent of Jesus Christ the world was sunk in the lowest depths of wickedness, and ignorance, that, therefore, God had sent had only begotten Son to teach me how they should live in order to inherit the kingdom of heaven. What, then, was my amazement to find that centuries before Christ, philosophers had lived in Greece who taught all that seemed to me most admirable and most needed for the spiritual salvation of mankind in the Christian religion. Where, I asked was the need of God to incarnate in human form in order to reveal truths, a knowledge of which already existed in the world. I found little or nothing in the ethical teaching of Jesus superior to what one might find in the philosophy of Plato, and I might also add of Epictetus and Marcus Aurelius. I may have been wrong—probably I was—but at any rate the discovery of this fact, if fact it was, first shook the foundations of my belief.

My religious convictions received their second shock when I read Darwin's epoch-making "Origin of Species." Here we had the cosmology and biology of the Old Testament absolutely subverted. My belief did, however, in an enfeebled form survive that shock. It was possible to argue that those parts of the Bible, which were inconsistent with modern science were allegorical, or in the termination of the Swedenborgians, "written according to the law of correspondences."

But this kind of quibbling of tortuous and sophistical attempts at reconciliation became, as time went on, more and more repugnant to my sense of intellectual honesty. If Christ was omniscient why did he not correct the popular ideas in respect of these things?

Soon after this I was introduced to the study of Hindu and Buddhist philosophy. This, however, did not effect further subversion of my belief in Christian religion. Quite the contrary, whatever there was of beauty and truth in the Christian religion, appeared to me, in full blaze, to be but an imperfect reflection of that light, the primal source of all the great religions. This theory of a common origin solved the puzzled paralellisms found in so many great religions, even incidents and circumstances in the lives of the founders. The ethical teachings of some of the philosophies embraced the highest conceptions of the Christain religion, or went even beyond them in the sublimity of its ideals, and even included in its benevolence not only the human race, but all that lives, and appeared better adapted to the practical needs of our daily life.

Take for instance what may be called the pivotal doctrine of Christianity, the Divinity of Christ. Well, the idea of a divine incarnation or Avatar, has probably been familiar to the Hindu mind for several thousand

years. In the Bhagavad Gita, Krishna claims to be the supreme being, to know all things, to have created all things, to be immanent in all things. Further, he declares that it is by a knowledge of him that salvation is attained. "They verily who worship me, with devotion, they are in me, and I in them," says Krishna.

The idea of the sacrifice of a divine human person "himself to himself," at about the time of the vernal equinox, for the redemption of the sins of the people was no new one.

Before the light of modern science the gloomy theology of the "Fall" has vanished, and a cloud has been lifted from men's minds.

When pulpits are occupied by men whose reading has been wide and catholic, when their minds are no longer invincibly biased by their education; when their career and their very livelihood no longer depend upon the acceptance of certain antiquated beliefs, then, and not till then, shall we find our churches better attended for the inculcation of natural morals, by the more reflecting and better informed members of the laity."

Great wars seem to be in preparation. Within my copy of Haeckel's "Insulinde" I found a four-page illustrated notice of a book by Dr. Alex. Pfluger, privat docent at the University of Bonn, telling of his travels in the South Pacific Ocean. I translate the following:

The future of Germany lies upon the water; the Germans must spread out more, and get the air of foreign zones in their noses. To make the Kaiser's word practicable has been the leading thought of Pfluger in his travels and in the preparation of the book. I believe another war is not far away. Yes, for it looks like a hara-kiri of the flagship of the Japanese navy, the Mikasa that would be the natural answer of the naval officers to their Emperor's policy. They would not express their disapproval openly. The army is yet to be heard from. Even if they thought their Emperor had done wrong they would not revolt against his holy authority; but would turn their enmity towards England and America, and the Japanese advisers about him, who had wronged (or misled) their holy avatar. They would protect their emperor against such advice. Strange people! Malay and Negro—Britain may regret the alliance. Nobody can forejudge the East with any satisfaction. An American lawyer, who returned a few days ago from the Philippines where he is established as member of the bar, says: "Chief Ali is organizing a rebellion against the United States." He makes it plain that our white troops are "up against" a cunning, swift, murderous, silent, implacable foe We have put our hands into a box of snakes; while Roosevelt by his pro-English course during the Japano-Russian war, offended Russia by his insistence on peace, he, now, has offended Japan. Practically the United States sits down between two stools, by the Rooseveltian "statesmanship."

Clean Street Cars.—Topeka's board of health requires that the street railway company of that city shall fumigate its cars at least once a month.

"Medical Offices" Closed.—Fifty-two illegal "medical offices" in New York and Brooklyn have recently been closed by the post-office authorities.

Lupulin.—T. F. Reilly, New York (Jour. A. M. A., April 7), states that he finds lupulin a valuable mild anodyne and hypnotic and often an excellent substitute for more active drugs of this class. He believes it will be an excellent and safe substitute for the coal-tar preparations in cases in which the latter have been employed. In neurotic and high-strung people, who do not require an opiate, but are very liable to cultivate a drug habit, for non-organic pains, aches and insomnia, it is admirably adapted. For children it is often a good substitute for opium, as also for old people suffering from advanced renal disease, and it is of especial value for sleeplessness and nervousness following a mild debauch.

Turbinectomy.—E. Harrison Griffin (Med. Rec., April 14, 1906) does not believe in complete turbinectomy. He declares that only so much of the bone should be removed as is necessary to restore the normal canal and to give back to nature the proper function of the nose. A partial turbinectomy is not nearly so easy to perform as a complete operation. The great objection to the latter is that it makes the passage too large and removes something, which belong there, and which has a function to perform. Partial turbinectomy restores the normal anatomy. The writer has observed many cases of deafness in which the restoraton of the nasal passage has brought back hearing. Hemorrhages should be guarded against both before and after this operation. Nasal examination sometimes suggests the existence of Bright's disease. The local use of cocaine has made the operation of turbinectomy perfectly painless. Re-established nasal breathing results in a better supply of oxygen and consequent improved nutrition. The writer has operated upon over ten thousand cases, and always with gratifying results.

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OFFICIAL TRANSACTIONS.

REPORT OF A CASE OF MEGALOGASTRIA*

WM. RUSH, M. D.

ST. LOUIS.

In September of the past year there came to the Washington University Clinic a patient 74 years of age, a widow, complaining of palpitation of the heart. The woman was of German descent, a native of Pennsylvania, of long lived parents, free from all diseases of hereditary significance. As a girl and young adult she had done much hard work in the field. She had had no infectious diseases except measles, pertussis and influenza. Menstruation began at 14, was fairly regular. Was married at 23, three normal labors, no miscarriage, menopause without notable incident.

The trouble of which the patient complained, a somewhat annoying consciousness of the beating of the heart, had existed for about a year, without, however, causing any serious inconvenience. The patient ate well, had no discomfort connected with the taking of food, bowels regular without laxatives, slept well, only moderately nervous.

Patient was small of stature, but erect, active and unusually well preserved for one of her years. Lungs normal. Apex beat in fifth interspace in the mammary line, impulse rather forcible. Cardiac dullness from the midsternal line to the mammary line; no heart murmur; first heart sound at the apex distinctly divided. Liver dullness at seventh rib, edge of liver palpable, normal in consistence, two cm. below costal margin on deep inspiration. Lower half of right kidney palpable on deep inspiration, left kidney and spleen not palpable. No abdominal tenderness, and further than mentioned above no abnormal resistance.

Urine: twenty-four hours amount 750 cc., specific gravity 1018, pale, acid, trace albumin, no sugar, many hyaline casts.

Pulse regular, 80 per mm., radial artery not palpable. Blood pressure (Riva-Rocci), 195 mm.

Suspecting a possible gastroptosis or enteroptosis I inflated the patient's stomach. The stomach was found to be not sunken, but greatly enlarged. The percussion figure measured 20 cm. in height in the median line, and 21 cm. in width midway between the umbilicus and the ensiform cartilage. The normal dimensions of the percussion figure for woman is about 10 cm. height and 18 cm. width.

The patient was put upon 6 gr. daily of sod. nitrite. On her return one week later the palpitation had entirely ceased and the blood pressure had fallen to 155 mm.

The evening before the patient's second visit she ate her customary dinner between 6 and 7 o'clock, and the following morning at 6 she ate a light breakfast of coffee, rolls and one egg. At 11 a.m. the stomach tube was introduced, and patient received through the tube, without distress, 3000 cc. of lukewarm water. This water was discharged entirely free from food remnants of either the evening or morning meal. The stomach was again inflated, and the area of tympany found exactly what it was before, 20 by 21 cm., extending from near the ensiform cartilage snugly down into the left iliac region and to the symphysis pubis.

The patient repeated that she ate everything she liked, and that she had no sort of digestive disturbance. From the size of the percussion figure of this stomach, and from the amount of water that it will contain without distress to the patient it is clear that its capacity is far greater than that of the normal organ. Furthermore, from the absence of all subjective symptoms of digestive disturbance, as well as the absence of the objective signs of motor insufficiency, we must conclude that this is not a dilated or atonic stomach, but that it is a physiologically or naturally enlarged organ that is properly performing all its functions a condition known as megastria, or more generally I believe as megalogastria.

DISCUSSION.

Dr. A. E. Taussig had seen this patient a number of times with Dr. Rush. The case presented the three cardinal features of a

* Read at the meeting of February 1, 1906.

megalogastria: (1) the enormous stomach, (2) the lack of any gastric disturbance so far as the patient was concerned, and (3) the ability on the part of the stomach to empty itself as well as the normal stomach. The physician's interest in this stomach might be termed a purely platonic one. The patient was not sick, she had called upon the doctor on account of a cardiac disturbance. There was no way of determining how frequent such cases might be, but they must often be overlooked for the reason that the patient did not draw attention to the stomach. The etiology was not clear. It was probably a congenital abnormality, the patient being born with the enlarged stomach. How such a stomach was able to dispose of its contents without any difficulty was an interesting question.

Dr. William S. Deutsch asked if at the same time any of the other organs were enlarged.

Dr. Lippe thought it quite as commendable of the patient as of the doctor to overlook this condition of the stomach.

Dr. Charles Shattinger wanted to know the lateral boundaries as shown by the percussion figures. The question was whether the long measurement (from the ensiform cartilage down to the symphysis) could possibly have been due to vertical position of the stomach rather than increase of size.

Dr. Horace Soper said that the case was interesting inasmuch as there was often described a condition of dilatation of the stomach in pathological conditions, but this case was rare. It was hard to understand how such a stomach in that position could empty itself as this stomach evidently did. In connection with the physiological enlargement of the stomach there was evidently a compensatory hypertrophy.

Dr. F. J. Taussig, in this connection, mentioned Dr. Myer's method of estimating the size of the stomach by taking an X-ray photograph of the stomach after introducing into the stomach a rubber tube containing a metallic center, and he wanted to know if this was not a more accurate means than the percussion method. He wished to know, too, just how accurate were the percussion results compared with the findings at post mortem.

Dr. Rush, in closing, said, in regard to the size of the other organs, that this woman's cardiac hypertrophy had no connection with the enlargement of the stomach. The liver might possibly have been slightly enlarged, but if so, very slightly. There was no enlargement of any of the other organs noted. Of course it was impossible to say anything about the size of the intestine. This was not a dilated stomach, it was simply enlarged. He did not like the term physiologic enlargement. "Naturally enlarged" better described these cases, where the stomach was simply large, not dilated or atonic. As to the possibility of this being a case of vertical stomach, the lateral boundaries of the percussion figure excluded that. It was 21 cm. in width, this measurement being taken midway between the ensiform cartilage and the umbilicus. This woman weighed less than 100 pounds. In reply to Dr. Taussig's question Dr. Rush stated that by the use of the elastic tube referred to one could determine the lower border of the stomach, but not its capacity. The boundaries of the stomach could be determined with just as great accuracy by air and water percussion as by the means referred to. There was much variation in the reports as to the amount of water the stomach would hold. Ewald stated that 1600 cc., (or from 250 cc. to 1680 cc.) was probably a fair estimate. Others had given an estimate as high as 5500 cc. It would seem about as impossible that the normal stomach would hold so large an amount as it did that any normal stomach would hold but 205 cc. One author had given 2500 cc. in case of a very large man (height 7 feet) as abnormally large. Recently Dr. Rush had filled the stomach of a patient with water, and found that he could introduce but 1200 cc. without discomfort. A dilated stomach with the same boundaries as the one considered this evening held 2500 c.c. of water, though this patient was a man 6 feet in height. The characteristic feature of the dilated stomach is not its size, but its motor power, which is always impaired.

PRESENTATION OF SPECIMENS.

FRANCIS REDER, M. D.

ST. LOUIS.

RESECTION OF RUPTURED BOWEL.

THE first one of these cases required immediate abdominal section. It was a case where the history was totally obscure. This man sustained a compound fracture of the lower left femur about 4 o'clock one afternoon. He was taken to the hospital where his condition became alarming. His pulse steadily increased and his temperature lowered. When I saw him twenty-six hours after the accident, the pulse was 132, temperature 99 degs. He had a pulse of 98, temper-

ature of 102 deg. a few hours after the accident. I found the abdomen tympanitic, there was much pain in the right hypochondriac region, his face was searching in expression, there was an anxious look, with pinched features. Upon being asked if anything had struck him upon the abdomen he at first failed to recall any such experience, then said that a clod of earth had struck him on the lower rib and glanced off, that it did not amount to anything. It required an hour and a half to convince those interested in the patient that a serious condition existed in the abdomen and to get their consent to an operation. When section was made, not knowing just what the condition was, or the exact location, I entered at the median line. The rigidity of the abdominal muscles was not relieved by the firm and constant pressure of the hand; no vomiting. I had no difficulty in locating the injury after abdominal section. It was near the ileocecal junction and proved to be a torn mesentery and a ruptured bowel. I resected eighteen inches of the bowel. The abdomen was full of blood. Blood was removed by dry mopping—drain was introduced. This is a gangrenous condition that took place eighteen or twenty hours after the injury. The man lived five days and then died, I presume, of a septic peritonitis. I was surprised after noting the condition of the peritoneum that he did live five days. The tear is along the mesenteric attachment of the ileum.

GALL BLADDER WITH GALL STONE IN CYSTIC DUCT.

The other case is a gall bladder removed from a woman who had been ill ten years. She was very much emaciated, with a complexion like parchment, the skin seeming attached to the bone, there being no fatty tissue. She said she had at times been very sick and was readily exhausted after doing a little work about the house. The liver was in a normal state as to size, but markedly greyish in color. This stone occupied all of the gall bladder and extended into the cystic duct, pressing upon the common duct, it caused permanent jaundice. I kept her in the hospital for general observation. Her condition changed rapidly. Her cheeks took on color, she called for food and the bowels began to move without aid. She was brought in on a stretcher and was able to walk out four weeks later.

GANGRENOUS TOE.

The third specimen is the little toe that I removed today. The woman last week went down town and her toe began to ache. She pared it with a knife causing it to bleed. The next day it pained her very much. She had a normal pulse and temperature, and slept fairly well. Examination revealed pus in phalangeal action of this toe. I found sugar in the urine. The operation was done under local anesthesia. She did not feel the insertion of the needle, and though I used but very little cocaine she experienced no pain in the ablation of the toe. A great deal of pus has penetrated into the joint and collected underneath the tissue. I have put her on bichloride of mercury, which I have found beneficial in some cases of diabetes mellitus. The end of the toe is gangrenous. I have seen two deaths as a result of infection following the paring of corns. What the result will be in this case I am not yet able to state. From the amount of sugar in the urine the prognosis is an unfavorable one. The patient is 70 years old.

DISCUSSION.

Dr. Norvelle Wallace Sharpe did not think any one was in a position to criticise the wisdom of this amputation. He had at this time a diabetic case that was bothering him. A gentleman had called upon him for an opinion upon a trouble with his foot. He had an infected foot. The great toe of the right foot had two ulcerated patches and brawny induration running well up to the ankle joint. Dr. Sharpe knew something of this gentleman's history. About eighteen months before this, he had been told, that "he was threatened with a diabetic gangrene of the foot," and since that time he had had an infected foot with which he had been walking, and upon which no intelligent care had been bestowed. The urine showed considerable sugar, abundance of albumin, hyaline and granular casts. It was remarkable that a man with so marked a type of diabetes had been able to carry an infected foot for that length of time without serious consequences. Dr. Sharpe had advised him to have the foot thoroughly cleaned, as it was a menace to him, and while assuring him that any operative procedure was fraught with danger, his actual peril was greater with the septic foot than with the operation. The toe nail was removed and at the base of it the tissues looked gangrenous. Within forty-eight hours a true gangrene supervened. This was maintained in the dry form. The dry gangrene finally merged into the moist, but it did not spread rapidly. After seven weeks the phalanx terminal had to be removed, and there was a fair quantity of pus. Dr. Sharpe then deemed it necessary to remove the proximal phalanx, (the patient had persistently refused high amputation, saying that below the ankle anything might be done, but even

there that which was only absolutely necessary). Finally, the great toe, the second toe and their metatarsi were removed. The especial point of interest was the infected foot in a marked diabetic of at least eighteen months' standing without important local or general changes. Another point of interest was that this gentleman, though abnormally sensitive, had been anesthetized twice, with perfect result with the scopalamine, morphine and ethyl chloride-ether combination. He came out from under this anesthesia with a nice full pulse and no nausea.

Dr. Soper, referring to the removal of the infected toe, thought that the surgery was to be commended. He had seen a similar case in which there was pus in the joint and it had gone to the bad for lack of thorough operative procedure.

Dr. Deutsch said that it was not a question any longer as to the results following surgical interference in cases of diabetes mellitus. A continuous gangrene was to be expected, but the doctor's premises in amputating this toe because the sepsis were correct, for the sepsis was more likely to kill the patient than the diabetes. It was always bad surgery to amputate if conservative surgery and watching the condition would take its place, for amputations in diabetics were followed by poor results.

Dr. W. C. G. Kirchner, speaking of the first specimen presented, said that it illustrated that class of cases often too long neglected. Those having hospital experience saw such cases persistently. They always came to the surgeon at the very last stage. These patients were given morphine and were often practically hopeless cases when first seen by the surgeon. There was no discoloration of the abdominal wall and this led the patient, his friends and the doctor astray. There might be no external indications of trauma of the abdominal wall, yet with rupture of the spleen, liver or kidney. He had recently seen such a case at the hospital. A man entered the hospital with no sign of injury to the abdominal wall, yet a ruptured spleen was removed, the bleeding continued, and the next morning it was found that there was an extensive rupture of the liver. That patient died of hemorrhage. Such cases should all be explored as soon as possible. The second case is interesting because those large stones would sometimes perforate the gall bladder and enter the intestinal tract. In one case that had come to his attention the stone was of sufficient size to obstruct the bowel and peritonitis followed. Gangrene following slight injury in diabetes was frequent, and he had seen the entire leg affected progressively.

Dr. M. J. Lippe, referring to the second case, said that the stone had evidently been in the gall bladder a very long time. This woman had complained of a train of symptoms of one kind and another for a very long time, and she had seen a number of doctors and had been allowed to go on to an age when operation was more dangerous than if undertaken earlier in life. Eleven years ago Dr. Lippe had seen a patient who complained of a pain in her stomach. She would have this pain and again get better. Dr. Lippe had concluded after two or three years that this patient must have gall stone disease. For eleven years he had observed this patient, but there was no set of symptoms that would allow him to make a positive diagnosis of stone in the gall bladder. Some two months ago this patient was taken with severe pain. He could palpate the distended gall bladder. There was also a rise in temperature. When he had exposed the gall bladder he had found it was large as the fist and had gotten out a lot of muco pus, but could find no stone. Down in the cystic duct was a stone as large as the end of his thumb. It was embedded in the duct and only by considerable pressure was he enabled to milk it back into the gall bladder. He used the Mayo method, and within two weeks the gall bladder ceased draining and the woman made a perfect recovery. If there was any set of symptoms by which the diagnosis could be made, these patients would not have to go on suffering for so many years. The diagnosis of stones in the gall bladder was not easy; impaction in the ducts of course is not so difficult.

Dr. William S. Deutsch thought these remarks belittled both medical and surgical men. He was sure that Dr. Rush and Dr. Taussig would bear him out in the statement that these gall bladder cases did give a train of symptoms that would permit a diagnosis of the disease. It was true they might not be able to decide just how many stones there were, or exactly in every case where they were until the abdomen was opened, but it was certainly possible to diagnose these cases.

Dr. Lippe replied that if the previous speaker could diagnose stones in the gall bladder so readily he should tell the profession how he does it. Impacted stones with colic or jaundice, which occur years after the formation of stones in the gall bladder is easily diagnosed. Dr. Lippe replied that statistics showed that fully 50 per cent of the people past middle life had gall stones,

yet many of these certainly did not manifest symptoms of the disease, at least not sufficient for a diagnosis. Sahli could not make this diagnosis in many cases, DaCosta could not do it and many other good men were unable to do it. Ten per cent of the people present had stones in the gall bladder and did not know it. The presence of stones was a very difficult matter to diagnosticate.

Dr. Shattinger considered Dr. Lippe's remarks exceedingly to the point. He had said something Dr. Shattinger had often wanted to say himself. For many years on the floor of the medical society, they had been told that they must bring these cases to the operating-table early, and often had their eyes regaled with bead-strings of gall stones. Many had been the admonitions that the general practitioner should not allow his patients to suffer untold agonies for untold ages, but to get them operated upon. But these gentlemen had failed to tell the general practitioner just how to make the diagnosis. After a patient had had all sorts of diagnoses made, after all sorts of treatment had been tried for years, and after an immense amount of data had been collected, then, when this patient came to the surgeon and told him the story, when this surgeon had the benefit of everybody's mistakes and was driven by exclusion to make a diagnosis that was something more than a shrewd guess, he operated and pulled out the gall stones and then criticised all his predecessors. It was a fact, as Dr. Lippe had stated, that in very many cases one did not get symptoms clear enough to make the necessity for operation apparent.

Dr. A. E. Taussig came to the defense of the internist and expressed his belief that in a great number of obscure cases the diagnosis could be made. Each case must be considered upon its merits. If it were possible to state a few symptoms by means of which the diagnosis could be made in the great majority of cases, nothing would be easier than the recognition of gall stones. It was necessary to examine the liver, the urine, to know the history of pain, etc., in fact the patient must be examined from the ground up, there must be a careful study of the gastric function; then if the physician could not conceive of any adequate explanation of the symptoms except the existence of gall stones, the diagnosis was sufficiently certain to justify turning the patient over to the surgeon. If the case had been studied with sufficient care, when turned over to the surgeon the gall stones would be found. Of course, many cases gave no symptoms. In the case described, the very fact that a large gall bladder was felt indicated that there were no stones in the gall bladder, for in such cases the gall bladder was usually shrunken.

Dr. Deutsch stated that his object in making the remarks he had was to bring out a little discussion on the subject. He had noticed that the Eastern societies devoted but little time to the set papers, but they had these discussions, which were most helpful. In regard to Dr. Lippe's remarks, while it was not always possible to diagnose the number and size of the stones, yet it was possible to diagnose trouble in the gall bladder region. The works of Moynihan and Mayo gave a train of the symptoms found in such cases, and Dr. Deutsch believed these men were competent and positive in their statements.

Intestinal Obstruction.—G. P. La Roque, Richmond, Va. (Jour. A. M. A., April 7), gives in rather full detail the diagnostic points and symptoms of simple dynamic ileus and of mechanical obstruction of the bowels in its various forms. He gives a table for differentiating strangulation from occlusion and a study of individual symptoms. The differential diagnosis between mechanical ileus and all forms of acute dynamic ileus, particularly those due to pain, from acute pancreatitis, appendicitis, etc., are noted. The article is instructive in its details.

The Formation of Uric Acid.—L. B. Mendel, New Haven, Conn. (Jour. A. M. A., March 24), discusses the formation of uric acid in the body, reviewing the later physiologic investigations on the subject. The probable endogenous and exogenous antecedents are considered, and the probable chemical reactions involved in the formation of uric acid from other purin bodies are given. He calls attention to the peculiar role of enzymes in both the formation and destruction of uric acid. The organs and tissues concerned in these processes and the factors modifying these metabolic changes are all considered and treated of in detail with full references to the leading literature on the subject. There are many admittingly missing links, especially as regards the origin and significance of endogenous uric acid. The questions yet remain to be solved as to the cause of the modifications in physiologic conditions, the variations of the endogenous output, the tolerance of the organism, the chemical regulations of the balance between formation and destruction, the differences in different species as regards purin metabolism, and still many other unmentioned questions yet remain for investigation.

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EDITORIAL

Illinois State Medical Society.

THE annual meeting of the Illinois State Medical Society will be held in Springfield, May 22 to 24, and promises to be one of great interest and profit. The location being being central, will attract a large attendance, and then Springfield has always opened its doors on such occasions, and as a result the meetings held there have been uniformly successful. The preliminary program has not yet been announced, but a full one is assured, as the number of papers allotted to each section were supplied early in March. Since the reorganization of this society some few years ago it has been gradually growing in numbers, until now it is among the foremost in numbers in the United States. The spirit of organization is growing, and largely through the missionary influence of Dr. McCormack, who in his journey through Illinois has preached the spirit of fraternity and the usefulness of medicine to every community, encouraging laymen as well as physicians to see the true light in organization and perfected service.

The Illinois State Medical Society is decidedly in line with this wave of organization, and is more and more becoming of greater service to its members in all that pertains to a united brotherhood and honorable, scientific profession which seeks the opportunity for greater service. F.P.N.

DR. PALMER FINDLEY, of Chicago, will remove to Omaha on May 1st, where he will in future reside. He was recently elected to the chair of gynecology in the College of Medicine of the University of Nebraska.

The Crusade Against Illegal Medicine.

THE crusade against quacks and medical men and midwives doing illegitimate work which was inaugurated by the St. Louis Medical Society some months since has borne fruit. In two lower courts judgments have been gained in the test case in the matter of indecent and obscene advertisers, and the prospect is that this decision will be confirmed by the higher courts to which the case is being taken. A test case against one of the papers carrying such advertisements is at present in the courts, and if the explicit wording of the law stands there can be but one result in face of the facts.

The matter of abortion has been taken up, and as a result of the evidence brought to the State Board of Health the certificates of two midwives and one physician have been revoked.

The St. Louis Medical Society has raised a fund to follow up this good work and cleanse our city of these evils. The undertaking is tremendous and merits the moral and financial assistance of every lover of decency and order. Its success depends on a continuance of endeavor for months, and until the desired end be accomplished. A spasmodic effort with slight result and then relaxation is worse than making an attempt. The campaign must be vigorously pushed, and those active in it should be assisted by the profession and by the public that our cleaning may be thorough and permanently effective.

The Fee of the Physician.

MUCH is being written in the medical press about the scientific side of medicine, and but little upon the business side. And yet the scientific side cannot be fully developed unless the business interests of the physician are likewise looked after. There is a disposition at the present time "to cut-rates" in meeting the presence of more competition than has existed in the history of medicine. In place of this petty commercial spirit, there should be a fair increase in rates. There are many reasons for such an increase. In the first place at best medical skill and attention is probably the most poorly paid of any of the professions. The doctor as compared to the lawyer, for instance, receives paltry fees. This has been so since time immemorial. The education of the physician is probably more expensive than that of the lawyer. The expense of doing business is as a rule more for the doctor than for the lawyer. The nature of the doc-

tor's calling and work is indeed more enobling, self-sacrificing and with a higher end result than that of the lawyer. While the lawyer struggles over the mere dollars and cents in dispute, the doctor struggles for the life of his patient, besides which the possession of wealth fades into insignificance.

The practice of medicine at the present time requires a liberal preliminary and professional education. It requires residence in hospitals without pay, it requires time for post-graduate work. It requires money for expensive equipment, instruments of precision and skill. Improvements in these instruments leads to their disuse and the necessity of buying new paraphenalia from time to time. And again, after a time of hard work in practice, the up-to-date physician needs a rest, a change of scene and a relaxation from labor. At the same time, after a while he needs to visit medical centers of learning, there to refresh himself by attendance with the masters so as to avail himself of all the new methods and advances since the time of his last post-graduate study. All this requires money. This money must be made by a judicious taxation of his patients, according to their means. Mistakes are made by physician as a rule in estimating the size of his patient's pocket-books with a loss on the side of the physician. The layman is too prone to take advantage of the physician in finance. The laity know how we estimate a fee by the means of the patient and some of them know how to accordingly underestimate their financial standing with physicians. More care should be exercised by the physician in this regard.

At the same time, the practice of some physicians of remarking that such and such a specialist's fees are "too large," or this or that surgeon's fee list "too high" should be depreciated. Instead there should be a laudable effort made to make the practitioner's clientele understand that the physician must be well paid if he is to give the best that is in him in the saving of human life. This depreciation of another physician by one physician is most pernicious, and only serves to make the rates worse than they are now. When patients are brought to the surgeon for operation, the practitioner should not fix the fee for the surgeon. Let the surgeon attend to that. If he gets a fee of the proper size from the patient, the practitioner who has sent him the patient should not commiserate with the patient afterwards, agreeing with him that the fee was "exorbitant," as is often done. Let him defend the higher standard and let him also elevate his own standard. In no other way can this matter be put in its proper place.

In this place, it is but fitting to speak of the niggardly practice of physicians encouraging the various insurance companies who pay for the first aid treatment for injuries of employes of corporations to cut their rates to the absurd state so largely exposed in the Journal of the American Medical Association. In the issue of March 31, 1906, there is interesting reading concerning the rebuke given by the editor of the Journal to the president of the Maryland Casualty Company for the ridiculously low scale adopted by that company for payment of physicians employed by them. The president of that company denies the right of the medical press to protest against these low rates for service. He says it is no man's business to protest against them as long as physicians are content to take the work and take the pay offered by them for such work. We contend with Dr. Simmons that it is the province of the medical press to protest. We contend that the physician should refuse to give their services for niggardly fees. These accident and casualty companies derive a large part of their revenue from the practicing medical profession. They have at their disposal at all times the honest advice and honest opinions of the medical men who are treating accident cases all over the country. They should be willing to encourage the medical profession in the high character of its work by lifting it out of the commercial field in which they are trying to put it by elevating rather than by depreciating their fee lists. They do not realize that such a depreciation long-continued will work great havoc to their own interests. Suppose for a moment, that a doctor could be "bought" and sold" for the highest bidder; suppose his opinion instead of being candid and honest and straightforward, whether it be good for the patient's pocketbook or for the company's, was always dependent upon the amount of money offered to him, what state of affairs would follow with these accident and casualty companies? Many and many a damage suit is averted, many and many a damage suit is settled out of court through the honest offices of the attending physician, and always with an advantage for the company; many and many a case in court ends with a judgment materially reduced by virtue of the attending doctor's honest expression of opinion concerning his patient's injury. What would happen to the accident and casualty compaines if by their antagonism, their cheap methods, their commercializing tenedencies they so brought it about that medical professional opinions could thus be bartered? There is no reason to fear that this could ever happen, yet these companies should be

reminded at this time of their injustice and their narrowness in viewing the matter of payment for medical attention.

R. B. H. G.

A Lesson from the Wave of Universal Health.

THE past winter has been one of those remarkable seasons when a wave of universal good health has swept over the entire country, and especially here, in the Mississippi Valley, where climatic conditions have been such as to insure no epidemics, and to prevent even the ordinary diseases of winter in their usual frequency. As a result of this rather unprecedented state of good health, physicians have had comparatively little to do. To the public, upon whose woes the prosperity of the physician depends, this has been a blessing, but to many physicians it has been a great hardship and trial. The young physician, just entering practice, has felt keenly the idleness which while expected, has been rather beyond the expectations of the most sanguine, while to many thoughtful physicians of established practice it has proven an unmixed blessing, because it has created an opportunity to avail themselves of the post-graduate school privileges, now so thoroughly presented in our many excellent schools in this country. The physicians supply dealers, pharmaceutical houses and physicians' specialty dealers have not had a very prosperous winter, due to the lack of demand for their goods. Now, reviewing conditions as they are all in all, it has been a good season, and physicians should not complain, for after all the public upon whom patonage depends, has been blessed and profited, and after all the public gives due consideration to medicine, when the demand exists, and will always be a friend to progressive medicine.

We quite agree with John Burroughs in believing that to share the common lot is good enough for any one, and that "unlucky is the man who is born with great expectations," especially in medicine. Such trying times as this past season give many a physician an opportunity to take account of stock and see what he really has to offer as services to a willing public when the opportunity eventually comes. He should clean up his stock, brush the cobwebs and dust off some of his old ideas, put in new thoughts by reading and study and visiting clinics, and thus make conditions really declare dividends by being better prepared for work when it does come. We have little sympathy with the man who is contented to let such opportunities for improvement go by and then bemoan his fate, when according to the law of natural events, this ebb of work is really an opportunity to be ready for the flow when it comes.

"Let us then be up and doing,
With a heart for any fate,
Still achieving, still pursuing,
Learn to labor and to wait."

F. P. N.

Dr. Charles A. Snodgras, Health Commissioner of St. Louis.

THE City of St. Louis and the profession have recently suffered great loss in the death of Dr. C. A. Snodgras, Health Commissioner of this city. Dr. Charles A. Snodgras was born forty-two years ago on a farm in Jackson county, Mo. His father, William A. Snodgras, and mother are living at an advanced age and reside with his sister, Mrs. Emily B. Mays, at Independence, Mo.

Dr. Snodgrass gained his collegiate education at the Missouri State University; after leaving this institution he taught for some years and spent his summers in post-graduate study at the University of Chicago, where he perfected himself in the branch of learning which was to be his life work.

In 1898, Dr. Snodgras came to St. Louis and was attached to the Department of Anatomy of Washington University. His indomitable will and close application to the study of medicine while teaching in Washington University enabled him to take the degree of Doctor of Medicine at that university in the year 1900.

As a bacteriologist he did some very valuable work in the recent suit of the City of St. Louis regarding the Chicago drainage canal, his investigations being complete and convincing to men of science.

In 1903 Dr. Snodgras was appointed city bacteriologist by the Mayor of St. Louis, in which position he worked unremittingly until his promotion to the position, first, of acting health commissioner, and finally—on the removal of the former incumbent—health commisisoner, of the city St. Louis.

Dr. Snodgras, while employed in teaching in Marshall, Mo., became acquainted with Miss Anna Gamble, a colaborer along educational lines in this school, and the acquaintance led to their marriage. Two children, Alvin, aged five years, and Dorothy aged three years, together with his wife, remain to mourn his untimely death, which occurred as a result of double pneumonia on Friday, April 6th, 2:30 p.m., at the City Hospital of St. Louis, notwithstanding the ungrudging

and sedulous attention of his professional colleagues.

Having been intimately associated with Dr. Snodgras for the last three years, and for the last year coming in daily contact with him, perhaps an estimate by me of his sterling worth and singular unity of purpose will not be amiss. Dr. Snodgras was a man whose mind had never been contaminated by any thing small or selfish. The one ambition that possessed him—that shaped his every act—was the desire to elevate the professional standing of medicine. He was just and rigorously honest. Simple in his tastes and mode of life—even childlike in his simplicity—yet withal the whole strength of his character seemed encompassed in the idea of stalwart manhood and professional zeal. Had it not been for his tenacity of purpose it would indeed have been difficult for him to attain that degree of scientific knowledge and professional acumen which became his very life, but which was accomplished by slow and patient application in various and tiresome struggles. Upon his promotion to the office of health comissioner his entire energy was devoted to a complete study of the various departments under him, in order that, before attempting any improvement, he might be thoroughly acquainted with every detail. To accomplish this purpose he gave each and every department careful and consistent study, making an extensive tour of the important pathological laboratories of the country, with the result that in a remarkably short time the several departments, their work and divisions, were entirely familiar to him. As a result of many important innovations had been begun. There was in contemplation by him the establishment of a tuberculosis clinic, at which those unfortunates afflicted with this grave disease were not only to be treated but to be educated in the methods which had for their object not only the benefit of the individual but the protection of those who came in contact with him. The idea of having diphtheria antitoxin supplied to all worthy poor and administered by the physicians connected with this department was another of the aims which was shortly to be accomplished. The fight begun by the St. Louis Medical Society against irregular and irresponsible practitioners of medicine found in him a worthy ally and one without whose aid the difficulties of this fight will be greatly increased.

In the space of this brief article it is indeed a difficult task to enumerate the many accomplishments and plans that he had in view. He possessed the confidence of each and every one of his subordinates. His simplicity of manner, his open-heartedness, made them, one and all, feel that in him they had a superior officer with whom they could consult and confer, and that ideas or suggestions made to him found always ready and careful attention. In his death the medical profession loses a valuable member, the city an honest, upright, and conscientious servant, and his family a devoted and loving husband and father. Though his public life was indeed short, yet it stands out clearly and boldly. It serves to set up a standard that those who follow him must strive to emulate. If naught but this were left by him as a heritage his life has served a noble purpose. H. J. SHERCK.

MEMORIAL MEETING OF THE ST. LOUIS MEDICAL SOCIETY.

Exercises in memory of Dr. Charles A. Snodgras, health commissioner, were held by the St. Louis Medical Society in the society's hall, 3525 Pine street, at 4 o'clock Sunday, April 15th. Dr. George Homan, president of the society, presided.

The invocation and benediction were pronounced by Rev. John W. Day, pastor of the church of the Messiah. Short addresses were delivered by Dr. Homan, Mayor Rolla Wells, Dr. W. G. Moore, Attorney Henry T. Kent, president of the Civic League; Dr. W. J. Miller, president of the Eclectic Medical Society, and John H. Matthews, bookkeeper in the health department. At the close of the addresses, a memorial to Dr. Snodgras, prepared by a committee composed of Dr. Robert Luedeking, Dr. John Joung Brown, Dr. O. H. Elbrecht, Dr. W. G. Moore and Dr. L. H. Behrens was read by Dr. Luedeking and adopted by a rising vote.

Dr. Homan spoke of Dr. Snodgras as one who, in the apparent prime of vigor and official usefulness, was called away when great possibilities of worthy achievements seemed about to be realized.

Mayor Wells' theme was "The Man as an Official." He referred to Dr. Snodgras as his loyal friend and public fellow-worker; a man imbued with purity of thought and whose whole being had been conservated to the uplifting of mankind.

Dr. Moore, on behalf of the medical society, spoke on "Appreciation of the Man by the Medical Profession." He reviewed step by step the life of Dr. Snodgras, beginning with his birth in Lexington, Mo., January 2, 1864, to his connection with the health department.

Mr. Kent, on behalf of the Civic League, spoke on "The Appreciation of the Man by the Community at Large."

Mr. Matthews spoke of the kindness and consideration with which Dr. Snodgras reated his subordinates.

REPORTS ON PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

INTERNAL MEDICINE.

O. E. LADEMANN, M. D.

Acute Dilation of the Stomach.—Herrick (Jour. A. M. A., March 31, 1906) speaks of acute gastric dilation as a rare and extremely grave condition. Its recognition is not always easy, yet important, as it is probable that the earlier treatment is begun the better is the outlook. He reports in detail two cases, one of them with a complicated pneumonia ending in recovery, and the other terminating fatally. A comparative study of the symptoms of these cases with those recorded in literature are in most respects quite identical. The onset is sudden. There may be a complaint of abdominal discomfort and pain, the latter may be quite severe. Vomiting large amount, which may be offensive, of a brownish, grayish, greenish or black color is quite characteristic, It almost seems to run out of the patient's mouth rather than to be forcibly ejected. The urine is scanty; the bowels loose or constipated. The temperature is often subnormal, the skin cold and clammy, small and rapid pulse, extreme thirst; in short the picture of collapse. The abdomen, especially the lower half, is distended, though it may be flat if the stomach be well emptied for the time being through free vomiting. A slight peristaltic wave was observed in one case. The percussion note is drum like over the gas-containing part of the viscus and flat over the fluid. Fluctuation and the succussion sound are clearly made out, the stomach tube with draws a large amount, sometimes several pints, of brownish, greenish or blackish rather thin or gruelly fluid. This fluid generally contains bile, perhaps pancreatic juice and some altered blood. Free HCl, as a rule, is lacking; lactic acid has been found several times. The odor is often offensive, almost never feculent. The gas that escapes through the tube or by belching is often abundant and may be of foul odor. H_2S has been found in one or two instances. The stomach, with or without the aid of distension, by air injected through the tube, can be outlined as greatly enlarged, extending to the symphysis. The abdomen flattens in contour as the fluid and gas are withdrawn by the tube. The diagnosis is not as easy as one might think. To be considered are peritonitis, either general or local, intestinal obstruction, pancreatic cyst, uremia, postanesthetic vomiting and acute pancreatis. Of especial value in diagnosis is the succussion sound, and the examination by the stomach tube revealing the characteristic fluid and enormous size of the stomach. The prognosis is grave, an extremely small number of recognized cases have recovered. Types of more moderate severity probably occur and end in recovery so that the prognosis, if these cases were more accurately reognized, would not be so grave as it is generally supposed to be. Some of the instances of late nausea and vomiting after anesthetics may be due to milder forms of acute dilation. Death when it occurs may be within the first forty-eight hours, or it may be delayed for more than a week. In general the disease runs its fatal course within a week. Relapse may occur, and intermissions of several hours with cessation of vomiting and improvement in symptoms have been noted several times. The treatment should consist in frequent gastric lavage, saline solution by the bowel and under the skin, nutrient enemata, strychnin and other stimulants hypodermatically. Change of posture to the right or to the abdominal decubitus should be tried to relieve the possible drag of the mesenteric vessels on the duodenum or the pressure of the overloaded stomach on the same portion of the bowel. It has occurred to the writer that possibly the stomach might be induced to contract by the application of ice to the abdominal wall, or of hot water or even hot air put into the stomach through the tube in the same way that the inert uterus after confinement can be induced to contract through these means. That the stomach wall has not entirely lost it elasticity and contractibility has been shown by its prompt shrinking to the escape of gas when pricked postmortem, as well as by the same contraction in the wall when at operation in a few cases the stomach has been opened and emptied of its gas and fluid. In intractable cases gastrojejunostomy is advocated. As etiologic facors are given trauma, surgical operation, overloading of the stomach, preceding or accompanying diseased conditions. In some cases the condition must be regrarded as idiopathic as no cause whatever is discernible. Concerning the pathogenesis, Herrick says that more careful histologic, chemical and bacteriologic examinations are necessary before this condition shall be made clear, and more attention should be given by the clinician to noting the condition of the stomach as regards location and size before and during operations and at the beginning of infectious diseases. A previously existing gastroptosis might predispose to acute dilation. So, too, the condition of the stools during these attacks might show whether or not the same peculiar blackish material found in the stom-

ach is present in the lower bowel, and in this way throw some light on the possible presence of duodenal obstruction.

Santonin in the Urine.—Neuhaus (Deutsche Medizinische Wochenschrift, No. 12, 1906) suggests the following as a reliable and efficient test for santonin in the urine: A few drops of Fehling's solution are added to several cc. of urine, whereupon a dark green color appears which changes to dark violet-red as the amount of copper solution is increased. On adding an acid, preferably acetic acid, the color turns to a light green. Stronger acids render it a darker green. The reaction is exquisite in the urine of children taking the ordinary dose of satonnin, while adults require a correspondingly larger dose of the drug. The only drug causing a similar reaction which the author observed is rhubarb, although differing from the santonin reaction in an absence of the violet-red color on the aditional adding of Fehling's solution, and the light green appearing when an acid is added is of a dirty tint.

Suicide by Means of Veronal.—Ehrlich (Muenchner Medizinische Wochenschrift, No. 12, 1906) had the occasion of observing two cases of suicide by this means. The symptoms in each case closely simulated opium poisoning, consisting in cyanosis, unconsciousness, superficial respiration with intervals of cessation, vomiting, cold extremities, pupil contracted to the size of a pin's head without any reaction, and a pulse varying in volume (small) to complete imperceptibility. In the one case, a melancholiac with suicidal tendency, age 57, death ensued thirty hours after the taking of 15 grams and the other twenty hours after 11 grams.

A Delicate Reaction for Bilepigment.—Kroküwicz (Muenchner Medizinische Wochenschrift, No. 11, 1906) published this test for the detection of bile in the urine in 1898, and has since given the reaction a thorough trial in testing for bilepigment in other fluids (stomach contents, etc.). In making the test three reagents are required, namely: (a) one per cent aqueous solution of sulfanilic acid; (b) one per cent watery solution of sodium nitrite; (c) chemically pure concentrated hydrochloric acid. The solutions a and b should be kept in dark bottles. One cc. each of solutions a and b are thoroughly shaken in a test-tube for a short time, when all save a few drops of the contents (one-half cc. at the most) are poured out of the tube. To the contents remaining in the tube an equal amount of the fluid to be tested is added (about one-half cc.). This mixture turns a ruby-red color and by adding one or two drops of the concentrated hydrochloric acid, diluting the whole several times with distilled water, an amethyst-violet color appears. Fluids to be tested containing a large amount of bilepigment should be diluted about ten times with distilled water before testing. The writer urgently recommends this reaction as more delicate than the tests of Gmelin, Brucke, Fleischl, Rosenbach, Smith-Marechal and Rosin.

Aortic-Rupture and Arteriosclerosis in Children.—Oppenheimer (Virchow's Archiv, Bd. clxxi, Heft No. 1, 1906) reports in detail two interesting cases of arteriosclerosis in boys, age 9 and 10 respectively. In the first case the child died from spontaneous rupture of the aorta. Oppenheimer regards the high blood pressure and a possible congenital weakness of the wall of the artery as responsible for the condition, while the cause in the second boy was undoubtedly of toxic origin. The pathologic findings in each instance were identical to those of typical arteriosclerosis.

Gastric Mucus.—Schütz (Archiv für Verdanungs's Krankheiten, Bd. xl, Heft 5 and 6, 1906) article embraces an elaborate discourse on pathologic variations in the secretion of mucus in the stomach. His studies consisted in examining the expressed contents of a test meal one hour after its ingestion, an examination of the rising water obtained after the stomach had been emptied, and the stomach contents obtained by expression and lavaging of the fasting stomach. He presents in tabulated form the findings in 110 patients with various gastric affections who had been subjected to these three tests. In 52 per cent of the cases the mucus present was in excessive amount, while in the remaining number of patients it was either scanty or absent altogether. Among the latter there were 9 cases of achylia gastrica, 8 of motor insufficiency, 7 of gastralgia, 9 of gastric neurosis, 4 of anacidity, 3 of hyperacidity, 1 of ectasia, 2 of chronic catarrh, and one each of ulcer, subacidity, cicatricial stenosis of the pyloric end, gastrosuccborrhea, constipation, renal calculi, acute dyspepsia and icterus. In 28 cases of chronic gastric catarrh, 6 cases of cancer of the stomach, one case of hepatic cancer and in one of gastric ulcer the mucus was found excessive at all three tests. In the second and third tests alone, the mucous was found excessive in ten patients, among them one case of ectasia, two of motor insufficiency, one of gastrosuccborrhea, one of chronic nephritis with dyspepsia and in three of gastric neurosis. The mucus was found excessive in only the second test in two cases of motor insufficiency and in one case of gastric

neurosis. In the third test alone it was excessive in seven cases, including two of subacidity and one each of anacidity, hyperacidity, ulcer, neurosis and cicatricial pyloric stenosis. In healthy persons, the author's observations substantiate those of Schmidt and Tellering, who assert that the presence of mucus in the stomach is insignificant. After reviewing carefully these various affections he believes his work in this direction will establish the conception of catarrh of the stomach on a more solid basis, although he does not attempt to draw any general conclusions.

Rhythmic Lateral Displacement of the Heart as a Sign of Unilateral Pleuritic Exudate.—Greene's (Am. Jour. of the Medical Sciences, March, 1906) more extended observations have convinced him of the accuracy of a statement he made in 1902 regarding the value of rhythmic lateral heart displacements as a sign indicative of unilateral pleuritic exudate. This dispalcement is most marked in exudates of medium size. During inspiration the heart approaches the side containing the effusion, while during expiration it moves outward. The extent of the displacement is quite variable sometimes as much as two inches. The movements are easily controlled by the fluoroscope, auscultatory percussion, or in case of right sided exudate by deep percussion of the free cardiac border, or in some cases even by mere inspection of the apex beat. Forced inspiration and expiration, especially the latter are prerequsite to success of the phenomena, and to accomplish this the administration of morphin must sometimes be resorted to. These rhythmic lateral movements have not been encountered in pneumonia, pulmonary tuberculous infiltrations, malignant disease of the pleura or lung, or in subphrenic abscess.

OBSTETRICS AND GYNECOLOGY

W. H. VOGT, M. D.

The Indications and Contraindications to the Use of the Obstetrical Forceps.—J. Thomas Schnell (American Medicine, Dec. 30, 1905) believes that more good results would be had, at least as to the condition of the pelvic floor, if chloroform were used for the short, low and easy forceps operations, and ether for the long, high and tedious cases, than with the brutal method of delivery without an anesthesic.

Bier's Treatment in Gynecology.—J. Eversmann (Zentralblatt fuer Gynaekologie, No. 48) makes use of a glass speculum closed at it outer end. Near the distal end of this speculum it is so arranged that a rubber tube can be attached, and to this in turn can be attached a syringe or air pump. The speculum is placed on the portio and then suction is established at first only very slight, later gradually stronger. After a sufficient amount of suction is established the suction is stopped, this operation is done every other day for a period lasting thirty minutes each time. This form of treatment in cases of endometritis seems to draw from the uterus the secretion and the increased blood circulation evoked aids in restoring the endometrium to its normal condition. Under this form of treatment the author has seen tense painful bands in Douglas' cul-de-sac soften, and finally entirely disappear.

The Hemorrhage of Placenta Previa.—(A. M. Dermid (American Jour. Obst., Dec., 1905).—If in the early months of pregnancy placenta previa can be diagnosed an abortion should be produced. Later on, when hemorrhage has occurred, the vaginal tampon is recommended to control the bleeding, and for delivery Braxton Hick's method of version is advised. If a piece of placenta becomes detached severe hemorrhage may follow, and in this case the head should be brought down with forceps as soon as possible, in order to get the advantage of its pressure, the further delivery will depend on the urgency of the conditions. It may at times be necessary to do a Cesarean section.

My Experience in the Treatment of Retrodisplacements of the Uterus by Operations on the Round, Uterosacral and Uterovesical Ligaments.—(A report of 129 cases by J. Wesley Bovee, Surgery, Gynecology and Obstetrics, Dec., 1905).— Retrodisplacements of the uterus has become the bugbear of women, but no woman ever applied for treatement for uncomplicated retrodisplacement. Certain classes of cases are successfully treated without directly treating the displacement; yet there are a large number of cases which must be treated surgically. The etiological features and the existing pathology must determine the nature of the procedure. After a fair experience with various surgical operations for the cure of retrodisplacements the author says that he is convinced that the Alexander operation has a very limited field, which could be extended largely by Goldspohn's modification; that vaginal fixation is hazardous; that ventro-suspension is unsurgical and dangerous; and that the mechanical features of the forces that maintain the position of the uterus is too much ignored by all procedures. He believes that the vaginal roof, including the uterosacral and uterosvesical ligaments, is the structure largely concerned in holding

the uterus in normal position. Of the 129 cases 61 were operated by the vaginal route and 68 by the abdominal route, with no mortality. By the vaginal route the round ligaments alone were shortened twenty-one times, the uterosacral alone sixteen times, and both in 24 cases. In the 68 cases done by the abdominal route, curettage was done 62 times, trachelorrhaphy 12; perineorrhaphy 16; colporrhaphy 10; removal of both appendages 51; herniotomy 6; appendicectomy 49. The round ligaments were shortened by the Baldy method in 60 cases, and the uterosacral in 52 cases. He thinks his results as nearly perfect as could be expected from any surgical procedure. The following deductions are drawn: 1. That the complications rather than the displacement furnish the cause for surgical relief. 2. All operations done, having in view the correction of uterine displacements, should be based upon the pathologic and anatomic abnormalities of the uterus and adjacent structures. 3. That any operation that changes one dislocation of the uterus into another is illogical, and hence unsurgical. 4. As a rule, the largest proportion of cases of retroversion of the uterus that require special operations are best treated by proper procedures upon the round and uterosacral ligaments.

The Technique of Shortening the Round Ligament.—(C. H. Mayo, Surgery, Gynecology and Obstetrics, Feb., 1906).—The following description is given by the author who has employed this method in many cases during the last two years: With the patient in the Trendelenburg position, the hand is inserted through a three or four inch median or slightly lateral incision in the lower abdomen and passed into the upper abdomen, to explore by touch the region of the gall bladder. As the hand is withdrawn the cecum is brought into the wound and the appendix examined. After dealing with such pathological conditions as are found, the pelvis is isolated from the general cavity by gauze and examined. The uterus is now placed in normal position. At the lower angle of the incision, a pair of curved forceps, Cleveland ligature carrier, or other similar instrument, is passed laterally beneath the aponeurosis, just over the muscle, to the point where the round ligament leaves the abdomen. This is facilitated by lifting the wall of the abdomen out and up with a tractor, also drawing the ligament tight with forceps from within. The handle of the instrument is now elevated, and its point seen from within is made to pass over the pulley of the round ligament, not under it, and only beneath the peritoneum, but is made to traverse the true course of the ligament, passing with it beneath the peritoneum, and when one-third or one-half way to the uterus it is pushed through the peritoneum and the ligament grasped at a point from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches from the uterus. This loop is withdrawn with the forceps. A similar procedure is followed on the other side. The loops are ligated together at the lower part of the wound.

Placenta Previa; A Series of 94 Cases.—(R. Warren, Lancet, Feb. 3, 1906).—In this able paper the following conclusions regarding the treatment of placenta previa are arrived at: The only certain means of arresting the hemorrhage is by pressure on the bleeding points. The progress and completion of the labor is secondary. In case of antepartum hemorrhages where the os will not admit a finger, bimanual and abdominal examination should be made, to reveal whether the placenta be implanted on the lower segment. These cases can almost certainly be saved if treatment be begun early. Labor should be induced early, since its completion is the ultimate cure. Should the os not admit a bag, or the performance of bipolar version, it must be dilated until one of the modes of treatment can be adopted. Having checked the hemorrhage the next step is to keep up the patient's strength. In severe cases this is best done by autotransfusion; i.e., raising the foot of the bed with chairs; next, in rapidity of action, comes intravenous infusion. Rectal injections cannot be given until labor is complete. As regards the third stage of labor, it is often necessary to remove the placenta manually.

The Gonococcus in the Puerperium, with Report of Seventeen Cases.—(W. S. Stone and Ellice McDonald, Surgery, Gynecology and Obstetrics, Feb., 1906.)—A review of the literature is given with a detailed report of 17 cases in which the gonococcus was found either alone, or in conjunction with the streptococcus or colon bacillus. All cases were in primiparae. In nine cases pain was located in one or both sides of the pelvic region and rigidity was marked in seven cases. The lochia were distinctly purulent after the fifth day and smears taken from the cervix after the discharge had become altered were much more apt to show gonococci than during the first few days. Premature labor occurred in three patients at periods varying from six and one-half to seven months. In one case there was streptococcus and gonococcus infection, suppurative salpingitis and general peritonitis. Another had a vulva-vaginal abscess. The third was uneventful and made a good recovery. These three abortions were the only late abortions occurring in 172 lying-in

patients. In view of this fact, it seems that the gonococcus may be a cause of late abortions, and in all cases of unexplained late abortions this infection should be considered. Gonocccus conjunctivitis occurred in three infants. No infant at birth showed any signs of inflamed eyes, and all had Crede's treatment from the prevention of the infection. The conclusions are the following: Gonococcus infection was present in a much larger proportion of cases of the obstetrical clinic than was previously supposed by the writers. The failure to discover the gonococcus by means of smears is explained by the fact that such smears are usually taken early in the puerperium, and are obscured by blocd. The positive diagnosis of the gonococcus is difficult in the absence of pus cells, and these do not, as a rule, appear until later in the puerperium. The temperature cure of the patients having fever were so varied and differed so much from one another, that no reliance could be placed upon this as an aid to diagnosis. The most common type, however, seemed to be that of a sudden rise followed by return to the normal in three or four days, simulating sapremia. The puerperal state has a direct influence upon the course of the disease. Gonorrhea, which has been latent before labor, commonly spreads upward with rapidity during the puerperium. Gonorrheal infection is a frequent cause of abortions, and in all cases of late abortions this should be considered. Thus if adnexal disease follows an abortion, it should not be ascribed to the abortion, as gonorrheal infection may have been the cause of both. No positive conclusions are drawn as to the relation of this infection to nutritional, or other disturbances in the children, except from the well known frequency of ophthalmia. The morbidity and the mortality, however, are relatively so marked in this series of cases that a relation between the disease in the mother and nutritional disturbances in the child is probable.

GENITO-URINARY.

T. A. HOPKINS, M. D.

The Diagnosis of Renal Calculus.—G. L. Hunner, Baltimore (Jour. A. M. A., March 24), remarks that few diseases present more protean symptoms and simulate so varied an array of other maladies as stone in the kindey. Large calculi may exist in and cause destruction of both kidneys without marked symptoms, while minute caculi may give rise to agonizing pains. The more common kidney diseases to be considered in the diagnosis of calculus are tuberculosis, pyelitis, pyelonephritis and pyonephrosis from the ordinary pus-producing infections, tumor and intermittent hydronephrosis. Each of these is noticed separately. The only positive evidence of renal tubercuosis is the finding of the tubercle bacillus in the urine or during the disease in animals by inoculation with the diseased urine or tissues. Other symptoms are a more or less unreliable. The differential stain must always be employed in diagnosing tuberculous from the finding of acid-fast bacilli in the urine, as is shown by a case here reported. It may be impossible to diagnose pyelitis, pyelonephritis or pyonephrosis from an infected nephrolithiasis except by operation, nor is it easy to differentiate between calculus and tumor, and here also the chief dependence is on the urinary examination. A movable kidney and kinking of the ureter may cause attacks closely simulating those of calculus, but the enlarged and movable kidney during the attack and the relief of pain and increased flow of urine on its return to normal size will aid the diagnosis. In this connection, Hunner mentions the unaccountable renal hemorrhages known as idiopathic hematuria or renal epistaxis, and says there is, he believes, a tendency nowadays to connect these with the chronic interstitial form of Bright's disease. The diseases of neighboring organs noticed as having to be differentiated from calculus of the kidney are gallstones, appendicitis, intestinal obstruction, pancreatic calculus and Henoch's purpura and angioneurotic edema; cases are reported illustrating the difficulties sometimes encountered. The history of the case, examination of the urine, etc., are generally the main dependence in the differentiation. Kelley's method, injecting the kidney pelvis with a bland solution, is mentioned as one of the best diagnostic aids in case of suspected gallstones. In conclusion he refers to Israel's saying that in diagnosing other than typical cases, one must, first of all, divest himself of the schematic picture so often presented in the text-books.

The Choice of Method in Operating upon the Hypertrophied Prostate.—Willy Meyer (Med. Record) advocates the use of the three methods in general use in operating on the enlarged prostate, according as each method fits the case be treated. It is not wise to practise one to the exclusion of the others. Each of the methods, perineal, and suprapubic prostatectomy, and galvano-caustic prostatotomy has its own decided merits, and holds a distinct place in surgery. Operation for enlarged prostate must be urgently recommended to most patients with enlarged pros-

tate as soon as it becomes necessary for them to use the catheter habitually. The death rate following operations is 5 per cent or less; the mortality due to pyelonephritis resulting from self-catheterization is much greater. The author has performed Bottini's operation in fifty-nine cases, perineal prostatectomy nine times, the sprapubic operation twenty-two times. The only deaths by the perineal method were from the anesthetic in one case, and in a case almost moribund at the time of operation. Of the twenty-two suprapubic operations, seventeen cases of benign hypertrophy are living, two died of causes not due to the operation; three of cancerous hypertrophy died of causes due to the operation; three of cancerous hypertrophy died of causes due to the nature of the disease. The author believes that it is possible to cut the grooves with the galvanocautery both deep and wide; that a median lobe is a contraindication to the Bottini operation, if is possible to do an enucleation; the cystoscope is of value in explaining the conditions at the neck; Bottini's operation, even when done twice, does not prevent a prostatectomy, should that become necessary. But, being a purely intravesical operation, it has many failures, and sometimes entails tedious after-treatment. If radical operation is refused it should be done. When prostatectomy is done full power over the urine is obtained. A small portion of the urethral mucous membrane may have to be removed with the gland, but it is no disadvantage. There is little choice between the perineal and suprapubic routes. In the perineal operation there is a rapid return to normal control of the urine, and leakage over the abdomen is not present. The suprapubic operation can be done in less time. Cystoscopy should always be performed before Bottini's operation, as the hypertrophy may be entirely intravesical. In advanced carcinoma Bottini's operation is to be preferred, since all the cancerous metastases cannot be removed. A gland palpable by rectum and rising not far from the sphincter muscle can best be attacked from below; when higher up and projecting into the bladder it should be operated on from above. When soft and composed of small lobes, operated from below. When complicated by a large calculus work from above. The preservation of sexual power is important, and the suprapubic method retains it in the largest number of cases.

Fever in Tertiary Syphilis.—Dudley N. Carpenter (Med. Rec., March 17, 1096) calls attention to the difficulty in the diagnosis of fever in tertiary syphilis. He illustrates his point by giving the history of two cases recently observed. The first patient was a man twenty-four years old, who was admitted to the hospital with remittent fever said to have been contracted at Panama. He was treated with quinine and arsenic. He denied syphilis. The plasmodium of malaria was not found and quinine was stopped. Fowler's solution, with an iron tonic pill, was given. Night sweats with occasional chills developed. The tubercle bacillus was searched for with negative results. Still later a slight swelling over the sternal notch was noticed and the patient reluctantly admitted having had an attack of syphilis four years before. Specific treatment was instituted and exploratory incision was made, revealing a pocket of thin brown pus at the sternal attachment of the sternocleido mastoid muscle. The necrotic parts were removed. In a few weeks a small ulcer of the velum palati appeared. With a mixed treatment containing mercury, it was noted that whenever the dose was moderately increased the lesions seemed to become aggravated. Observation of these cases shows the necessity of administering mercury with caution. Both of the patients whose histories are here reported improved more rapidly when potassium iodide was used alone. As the danger of large doses of mercury in syphilitic cachexia was realized, and since its use was regarded as a necessity in the cure of the disease, it was only after repeated trials in both of these cases that the true value of the iodide was appreciated.

Transperitoneal Ligation of Renal Vessels.—George Walker, Baltimore (Jour. A.M.A., Nov., 25), concludes from a study of the subject that with the ordinary methods of performing lumber nephrectomy there is danger that the operator may squeeze out tuberculous or malignant material, and thus cause a general infection. He gives his reasons for this belief in detail, and in order to prevent such a possibility proposes the following operation: "Do a laparotomy, push to the intestines to one side, incise the posterior peritoneum, expose the renal vessels, put a double ligature around each of them, cut between and free the distal end for a short distance. In passing the ligatures it is well to include a certain amount of the immediately surronding tissue, so as to pass around and ligate the lymph tract, which is not visible, but which runs alongside of and very near to either the artery or vein. The peritoneum is then closed posteriorly, and the anterior abdominal wound sutured in the usual manner. The patient is then turned on his side, and the usual lumbar nephrectomy is

done." He notes the objection that the procedure produces two separate wounds, but thinks that the opening of the peritoneum under proper precautions does not add to the mortality of the operation. On the other hand, he believes that removal of the kidney, through the laparotomy wound or performing a simple transperitoneal nephrectomy would probably be more dangerous than by removing it by the lumber route.

Scarlatinal Nephritis.—This most important complication of scarlet fever, its etiology and prophylaxis, is discussed by H. Lowenburg, Philadelphia (Jour. A. M. A., February 17). In scarlet fever, he states, the function of the skin is almost completely suppressed, thus overtaxing the kidneys, which are also called on to carry off the toxic agent of the disease. There seems to be evidence that this last alone may be sufficient to produce the kidney disorder without the usual clinical manifestations of scarlatina. Constipation, diet and exposure to cold are all-important contributory factors, the last mostly in susceptible and anemic patients. For prevention, Lowenburg would insist on good ventilation and constant, carefully regulated temperature (68 to 70 F.), a milk diet varied toward the close of the disease, with tender vegetables, fruits and farinaceous substances cautiously added. Fruit juices are refreshing and help to lessen urinary acidity. Daily urinary examination should be made, especially after each change of diet, and on any appearance of albumin a return to an absolute milk diet should be made at once. Hydrotheraphy is mentioned as the one chief remedy. The free use of water aids in elimination of toxins and it should be given as regularly as food. If plain water can not readily be taken, some of the mineral waters may be used, or better, lemonade or orangeade, to each pint of which a teaspoonful of cream of tartar may be added. A daily bath with friction is a valuable adjunct in promoting the skin functions, and its temperature should never be lower than 8 or 10 degrees below that of the patient. Enteroclysis is also of use; from 1 to 8 ounces of saline solution may be given once or twice a day. The only drugs of any value in preventing renal complications are alkalies and laxatives. Lowenburg would give 5 or 10-grain doses of acetate or citrate of potassium. Minute doses of calomel should be given at intervals of three or four days during the disease, followed by broken doses of magnesium sulphate. The use of antistreptococcus serum is mentioned and authorities favoring it are quoted, but without special recommendations.

MEDICAL MISCELLANY

Removes Tax.—The unjust tax to which Virginia physicians have been annually subjected was recently removed by a bill framed by Dr. Powell and passed by the House.

Offers Reward.—The New Orleans Board of Health offers a reward of $5 for the first live female specimen of the stegomyia fasciata brought to them, providing it is found in that city.

Hospital for Acute Alcoholism.—A Chicago alderman has introduced an ordinance providing for the construction and maintenance of a hospital for the treatment of acute alcoholism.

Hotel Belleclaire.—Physicians in attendance at the Boston meeting of the American Medical Association next June, who visit New York City, en route, will find Hotel Belleclaire a pleasant place to stop. Conveniently located, and complete in all its appointments. Make arrangements now to meet your friends there.

A Trip to China and Japan.—Dr. Alexander J. Stone is oragnizing a party of physicians, their families and friends, for a trip to Japan and China, and can offer transportation, including sleepers and dining car service to Seattle and return—hotel accommodations in Seattle—transportation on the 28,000 ton Steamship Minnesota to Japan and China and return; railway transportation and first-class hotel accommodations in Japan, with jinrickishas every day if desired—hotel accommodations and transportation in China, all included for $700. The party will leave St. Paul about July 21st; sail from Seattle July 25th, and reach St. Paul on its return about October 9th, making an expense of less than $10 per day. The cheapest trip of its kind ever offered. Those wishing to join the party should communicate with Dr. Alexander J. Stone, St. Paul, Minn.

For Rheumatism, Neuralgia, Tonsillitis, Pain and Fever.—

℞ Codeiniae sulph..... gr. iv
Acetanilide..... gr. xlv
Sodii salicylatis..... ʒ iiss
Alcoholis..... ʒ ss
Glycerinae..... ʒ ss
Syr. rubii idaeii..... ʒ ss
Aq. destillatae..... ʒ ss

M. Sig. Take one teaspoonful every three hours.—E. S. McKee, M. D., Cincinnati.

SURGICAL HINTS

(International Journal of Surgery.)

To obtain the best results of Colle's fracture the patient should be placed under an anesthetic during reduction.

In septic conditions of uncertain origin, the presence of localized pain will sometimes afford a clue to the portal infection.

To operate and find that a suspected osteomyelitis is actually an acute rheumatism is far preferable to deferring operation until an exact diagnosis can be made.

In operations on alcoholic subjects it should always be remembered that the vitality of the tissues is often so low that the application of even moderate degrees of heat may give rise to sloughing.

The transformation of uterine fibromata into malingant growths is comparatively common, and hence the possibility of such an occurrence should always be taken into consideration in the prognosis and treatment.

Patients with long and thick foreskins when suffering from gonorrhea are rather unfavorable subjects for a speedy cure. The prepuce seems to keep the urethra in an abnormally hyperemic condition, thus favoring microbal growth.

A condition sometimes simulating inguinal hernia is the protrusion of masses of fat through the canal in front of the peritoneum. If this fat be later absorbed a true hernia may result, owing to the dilated condition of the canal which remains.

Fecal fistula, if uncomplicated, small and situated in the vicinity of the ileocecal valve, will often close spontaneously. Operation should therefore be postponed until it seems certain that a cure cannot be hoped for by nature's unaided efforts.

In the treatment of intussusception the irrigation method should not be persisted in for too long a period, 48 hours being the maximum limit. The fluid should not be injected under high pressure, the irrigator not being suspended more than one and one-half or two feet above the patient.

The possibility of urethral stricture in young children suffering from urinary disturbances (frequent micturition, vesical tenesmus, retention of urine, etc.) should always be considered even in the absence of a traumatic cause or gonorrheal infecton. Internal urethrotomy followed by systemic dilatation is as successful in these cases as in older persons.

Among fractures of the carpal bones the scaphod is the one most liable to be involved. This injury is often overlooked on account of the absence of the ordinary signs of fracture, but should be suspected in the presence of localized pain, tenderness and swelling over the region of the bone.

Inflammation of the pleura are so often of tuberculous origin that it is well to treat all these cases as if they were acturally tuberculosis. Hence after operations upon the pleural cavity an antituberculous plan of treatment should be pursued and the patient kept under observation for some time.

For the control of nasal hemorrhage tampons can be readily prepared as follows: A layer of cotton is wound around a penholder or similar object until the desired thickness is obtained and then withdrawn. The cotton cylinder is then moistened, squeezed dry and inserted into the nasal cavity. If the projecting end of the tampon is now moistened it will swell up and thus produce sufficient compression.

An excellent ointment for the treatment of boils is that recommended by Bulkley. It consists of carbolic acid, 5-10 grains; fl. extract of ergot, ½ dr.; starch, 2 dr.; zinc oxide, 2 dr.; and ung. aquae rosae, 2 oz. It is spread upon the center of a moderately thick layer of absorbent cotton, several times the size of the inflamed area, and secured with strips of adhesive plaster. This dressing can be left on for ten or twelve hours.

Injuries to the elbow-joint the rapid development of marked swelling frequently prevents the diagnosis of a suspected fracture or dislocation. Under these circumstances the plan suggested by Gerster and described by Dawbarn will prove of value when the X-ray is not available. The patient having been anesthetized, an Esmarch elastic bandage is slowly and firmly applied from the hand up the forearm and over the elbow to the arm-pit. This is left on for about fifteen minutes and then removed from below upward, the final turns upon the upper arm being allowed to remain. The removal of the edema in this manner permits of the recognition of a fracture or dislocation, and this having been accomplished, the upper turns of the bandages are removed.

British Medical Association.—The seventy-fourth annual meeting of the British Medical Association will be held at Toronto, Canada, on Tuesday, Wednesday, Thursday, Friday and Saturday, August 21, 22, 23, 24 and 25, 1906.

THE MEDICAL FORTNIGHTLY

A Cosmopolitan Biweekly for the General Practitioner

The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scientific nature, and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

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The Medical Fortnightly will not be discontinued at expiration of subscription, as many of our readers prefer not to have their files broken on account of failure to remit. Unless we receive a distinct request to discontinue, and payment for all arrearages, this magazine will not be discontinued.

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Contributors should understand that corrected typewritten copy is essential to clean proof and prompt publication, and is much more satisfactory than manuscript. Original articles should be as condensed as justice to the subject will allow.

Editorial offices in St. Louis, Jacksonville, and St. Joseph, where specimen copies may be obtained, and subscriptions will be received.

Contributions and books for review should be addressed to the editors, 319 and 320 Century Building, St. Louis, Mo.

FAVORITE PRESCRIPTIONS

SEVERE DIARRHEA IN TYPHOID FEVER.—Osler employs a starch and opium enema; or bismuth in large doses and Dover's powder by the mouth; or a mixture of lead acetate, two grains, dilute acetic acid, fifteen to twenty minims, and morphine acetate, 1-8 to 1-6 grain.—Denver Med. Times.

ENLARGED SPLEEN.—The following is of much value in cases of enlarged spleen:

℞ Specific polymnia..... 3 x
Specific chionanthus.....
Fl. ext. grindelia squarrosa..aa 3 v
M. Sig.: Twenty drops three to five times a day.—Ex.

ACUTE DYSENTERY.—R. J. Windle recommends the following combination:

No. 1.

℞ Chloral hydrat..... gr. xx-xxx
Liq. opii. sed..... *m* xx
Aq. ad..... 3 j
Syr. aurant..... 3 ij

No. 2.

℞ Pulv. ipecac..... gr. xx-xxx
Aq. chloroformi..... 3 j
Mucilag. tragacanth., q. s.

No. 1 draught is given, and usually takes effect in from ten to fifteen minutes. When the patient is just asleep he is sufficiently aroused to take No. 2. It must be shaken up in a phial and poured out just before being taken. In many cases the patient will, after this treatment, sleep from three to six hours, and wake without experiencing any inconvenience. In some cases the ipecacuanha does produce sickness in spite of the chloral draft, but in these the author has not known it to come on in less than one and a half hours, and in no case did the vomit contain ipecacuanha, showing that it had already been absorbed.—Jour. of the Royal Army Medical Corps.

BASEDOW'S DISEASE.—That the antithyroidin of Mobius seems to have acquired a lasting place in the treatment of exophthalmic goiter, is evident from two articles contained in the Muench. Med. Woch. Glomer gave the serum internally (0.5 c.c.) three times daily, to a patient suffering from general paresis, complicated by Basedow's disease. The pulse improved at once and became slower, the goiter and the exophthalmos were less marked after eleven days, and the tremor and Graefe's sign disappeared almost completely. As soon as the treatment was stopped the symptoms reappeared. R. Durig recommends much larger doses (up to 150-210 drops daily), even though slight after-effects (headache, apathy) may appear. The rectal application is indicated where the serum is not well tolerated by mouth, but somewhat larger doses are then necessary.—Medical News.

CARDIAC DYSPNEA.—Satterthwaite ("Diseases of the Heart and Aorta") says that in severe attacks of dyspnea due to cardiac failure he gives nitroglycerine in doses of 1-100 to 1-25 of a grain. In sudden and violent attacks he gives a capsule containing:

℞ Nitroglycerin..... gr. $\frac{1}{100}$
Amyl nitrite..... gr. $\frac{1}{4}$
Menthol..... gr. $\frac{1}{50}$
Oleoresin of capsicum..... gr. $\frac{1}{100}$
Sig. One capsule every four hours.—The Med. Bull.

CYSTODIAGNOSTIC EXAMINATION OF GONORRHEAL SECRETIONS.—Max Joseph and M. E. Polano, having made many examinations of this nature (American Journal of Urology), conclude with Pappenheim, that mononuclear cells are always the first sign of the extension of the catarrhal, epithelial process to the submucosa, and their appearance gives distinct indications for prognosis and therapy.—Denver Med. Times.

EARLY STAGE OF INTERSTITIAL NEPHRITIS.—Hughes prescribed:

℞ Hydrarg. chloridi corros....
Auri et sodii chloridi..... gr. $\frac{1}{30}$
Ferri reducti..... gr. 1
Spir. glonoini..... *m* 1
One pill after meals.—Denver Med. Times.

FACTS AND FANCIES

A barber was busy trimming the heavy thicket of white hair by which Mark Twain is known, when the humorist's attention was drawn to a very small boy in buttons standing beside his chair.

"Hello, what are you," asked the humorist.

"A page, sir," replied the atom, swelling visibly.

"A page!" exclaimed Mark in assumed scorn, "Why you aren't big enough for a paragraph!"

"I say," said the traveling man in the fly-infested dining room of the little hotel, "I'll take a piece of that blueberry pie, please."

"That?" said the fair waitress. "That ain't blueberry pie—shoo!"—with a wave of her napkin—"that's custard."

Waiter (approoaching guest): I have deviled kidneys, pigs' feet and calves' brains.

Guest: Well, what are your ailments to me? I came here to eat.

"I have called to get some of the details of the wedding," said the reporter.

An expression of intense regret came to the dusky countenance of the servant.

"I'se awful sorry, miss!' she exclaimed, "but dey is all gone. You oughter come last night. De company eat up every scrap!"

"That old codger," remarked the traveling man "seems to be quite an independent old party."

"Waal," replied the village wit, "it's no wonder. He op'rated a purty successful corner in wheat this year."

"What?"

"Yes, siree! that corner lot o' his'n yonder. It yielded 950 bushels."—Philadelphia Press.

The little girl was on her first trans-atlantic trip. She refused all substantial food but drank great quantities of lemonade.

"My dear child," remonstrated her anxious mother, "why don't you eat something instead of drinking all that stuff?"

"Because," said the little girl, "lemonade is the only thing that tastes the same coming up as it does going down."

Nurse: "Tommy, dear, don't you want to come and see the sweet little sister a stork brought you?"

Tommy: "No. I want to see the stork."

"Isn't it nice," exclaimed the dear old lady who gets things all mixed, "that you can have some one look up your gynecological tree for you and tell you about what you come from?"

A negro had made several ineffectual efforts to propose to the object of his affections, but on each occasion his courage failed him at the last moment. After thinking the matter over he finally decided to telephone, which he did. "Is that you, Samantha?" he inquired upon being given the proper number. "Yes, it's me," returned the lady. "Will you marry me, Samantha, and marry me quick?" "Yes, I will," was the reply; "who's speaking?"

"That dog of mine," said a neighbor of Jim Spaulding, the witty farmer of Suncock, N. H., "has the keenest scent of any dog I ever saw. Why yesterday he traced me after I had gone seven miles from home. What do you think of that?"

"I think," said Jim, "that you need a bath."

His automobile had balked, as automobiles will. Fruitlessly he labored, with oil can and monkey wrench, until he was hot, dirty and disgusted, and only the presence of a crowd of children prevented him from expressing himself as the situation demanded. But at last he must speak or explode. Near him was a sweet little maiden with golden hair and deep blue eyes.

"Run away, little girl," he said, "there are a few things I would like to say."

"Go right ahead," said the child, "my pa has an auto too."

There is a little railway in Colordo on which no train was ever known to be on schedule time. But a few weeks ago the unexpected seemed about to happen, and the citizens of the terminal town assembled at the station with rockets, red fire and a brass band to welcome the punctual train.

"What's the celebration?" asked the conductor as he jumped off at the station. "Train on time," explained the crowd in chorus. "Put out your fires, you——fools," the conductor snorted; "we're just twenty-four hours late."

BUNIONS.— Plummer treats bunions by making his patient wear right and left stockings and a shoe which has the inner edge perfectly straight. The bunion is bathed night and morning in a four per cent solution of carbolic acid for a few minutes, followed by plain water. If after several weeks the bursa is still distended with fluid it is aspirated. If the bunion is due to flatfoot, the arch of the foot must be restored by a plate. When the joints are enlarged because of gout or rheumatism the constitutional conditions must be treated. In other cases osteotomy and tenotomy are required.—The Southern Clinic.

MEDICAL MEMORANDA.

Just a few lines to inform you of the excellent results I had with resinol in a most stubborn case of frost bite this winter. It would positively not yield to any other treatment, and by faithful use of this preparation, the patient is now completely relieved.—Jos. Lebenstein, M. D., 670 Lexington Ave., New York City.

"Our Observation of the medical literature indicates that echinacea is being used far more than formerly."—J. A. M A., April 8th, 1905. Ecthol contains in each fluid drachm twenty-eight grains echinacea and three grains thuja. It is put up in bottles holding twelve ounces and any physician who has not used ecthol, can get a 12-ounce bottle for experimental purposes by sending 25 cents to Battle & Co. to prepay express charges.

Quarantine Sketches is the title of an interesting booklet issued by the Maltine Co., Brooklyn N. Y., in which are portrayed the precautions taken by our government to prevent disease from being carried into this country by the thousands of emigrants that are landed every day. The pamphlet is beautifully gotten up, and the illustrations are from photographs. The company will take pleasure in sending a copy to any physician who makes request.

Eusoma in Infection.—Under date of January 20, 1906, Dr. J. R. Phelan, editor Oklahoma Medical News-Journal, Oklahoma City, Okla., writes: Last week I treated a case of infection following vaccination, in which the arm was much swollen, discolored, and so painful as to render sleep impossible. I put him on teaspoonful doses of eusoma, every two hours, and kept gauze, saturated with eusoma, around the arm; relief from the pain was almost instantaneous with the first application, and in twenty-four hours the swelling was reduced by one-half, while at the end of forty-eight hours the swelling and other evidences of inflammation had entirely subsided, leaving a perfectly healthy vaccination sore. The rapid improvement of such cases is very gratifying to both physician and patient.

Spraying for Diseases of the Respiratory Passages.—Dr. David Walsh, senior physician to the Western Skin Hospital, London, writes: Glyco-Thymoline was brought to my notice as an excellent lotion for nasal and oral sprays and washes. On due inquiry it was found to fulfil the two conditions usually recognized by medical men in the United Kingdom as vouching for the character, so to speak, of such a preparation. First, its advertisements are accepted by our three leading journals, the Lancet, British Medical Journal and the Medical Press and Circular. Secondly, its composition is not a secret, its formula being freely published. Under these circumstances, I determined to try the effect of this preparation in a few simple cases. As a general antiseptic fluid that does not coagulate albumen, and is non-irritant, deodorant and praetically non-poisonous, glyco-thymoline has clearly a wide range of usefulness. My own observations, however, have been practically confined to its use in the nose and mouth, with results that have proved satisfactory in every instance, especially in acute coryza, pharyngitis, influenza and septic conditions of the mouth.

Do not ligate tumors of the navel without making sure that intestine is not included wilhout the ligature.

Do not be too hasty in ascribing the cause of pain in the tendo Achilles, or Achilles bursa, to an ill-fitting shoe. First exclude gonorrheal infection.

THREE prime essentials in the nursery are fresh air, good food and pure water. Milk will not quench an infant's thirst. Give it pure water at regular intervals.

The history of a discharge from an ear appearing a few days to a few weeks after the beginning of a slowly developing deafness in that ear, unaccompanied at any time by pain, is suspicious of tuberculous otitis media.

THERE will be a sketch of that friend of all young hearts, Robert Louis Stevenson, in the April St. Nicholas, by Ariadne Gilbert, under title of "The Lighthouse-Builder's Son." While the boyhood of Robert Louis will be dwelt upon with much interesting detail, the story of his later life and his work will also be covered; and there will be extracts from Stevenson's letters and a number of interesting illustrations, one a reproduction of the bronze memorial of Stevenson by Augustus Saint-Gaudens, now in St. Giles's Cathedral, Edinburgh.